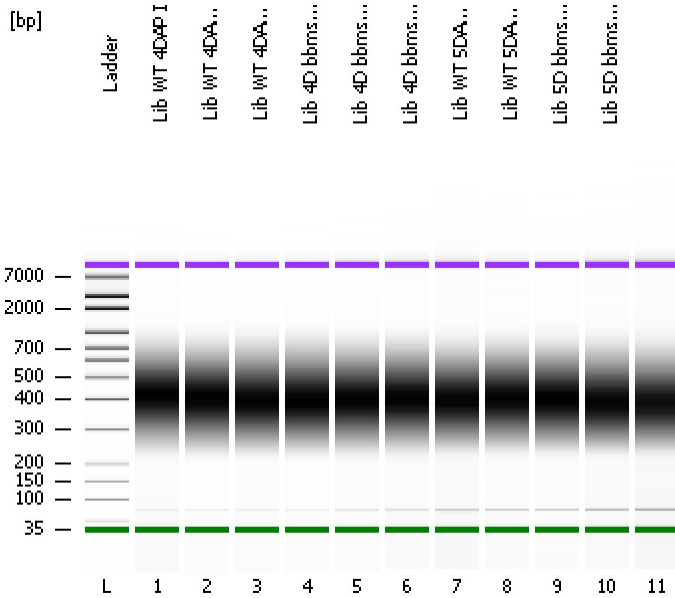


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-10\2018-12-10\_002.xad

Created: 12/10/2018 4:00:14 PM  
Modified: 12/10/2018 4:42:53 PM

**Electrophoresis File Run Summary**



Instrument Information:

Instrument Name: DE34903152      Firmware: C.01.069  
Serial#: DE34903152      Type: G2938C

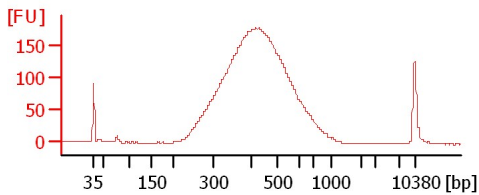
Assay Information:

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

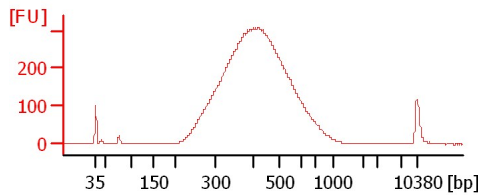
Chip Information:

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

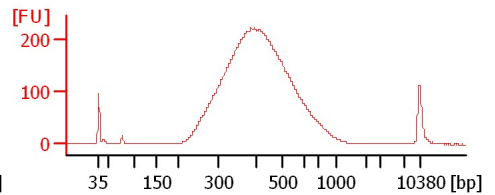
**Lib WT 4DAP I**



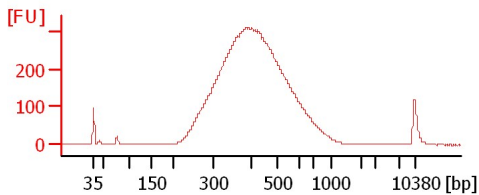
**Lib WT 4DAP II**



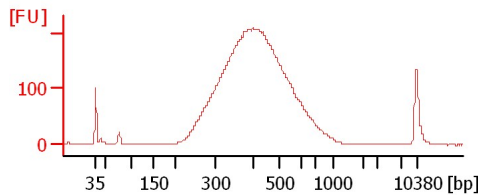
**Lib WT 4DAP III**



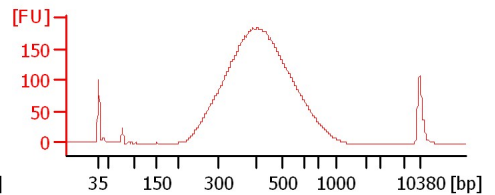
**Lib 4D bbms KO I**



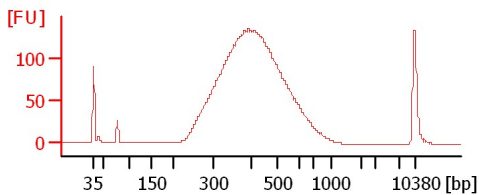
**Lib 4D bbms KO II**



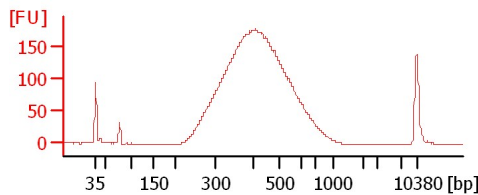
**Lib 4D bbms KO III**



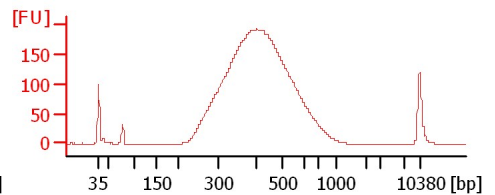
**Lib WT 5DAP II**



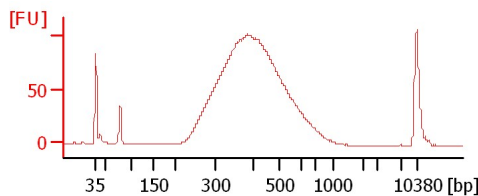
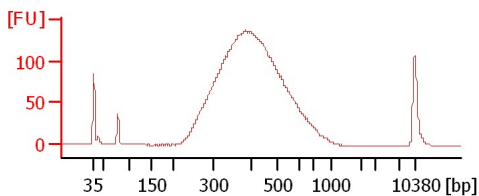
**Lib WT 5DAP III**



**Lib 5D bbms KO I**



**Lib 5D bbms KO II**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-10\2018-12-10\_002.xad

Created: 12/10/2018 4:00:14 PM  
 Modified: 12/10/2018 4:42:53 PM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
Lib WT 4DAP I		<input type="checkbox"/>	✓			
Lib WT 4DAP II		<input type="checkbox"/>	✓			
Lib WT 4DAP III		<input type="checkbox"/>	✓			
Lib 4D bbms KO I		<input type="checkbox"/>	✓			
Lib 4D bbms KO II		<input type="checkbox"/>	✓			
Lib 4D bbms KO III		<input type="checkbox"/>	✓			
Lib WT 5DAP II		<input type="checkbox"/>	✓			
Lib WT 5DAP III		<input type="checkbox"/>	✓			
Lib 5D bbms KO I		<input type="checkbox"/>	✓			
Lib 5D bbms KO II		<input type="checkbox"/>	✓			
Ladder		<input type="checkbox"/>	✓			

**Chip Lot #**

**Reagent Kit Lot #**

**Chip Comments :**

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-10\2018-12-10\_002.xad

Created: 12/10/2018 4:00:14 PM  
Modified: 12/10/2018 4:42:53 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

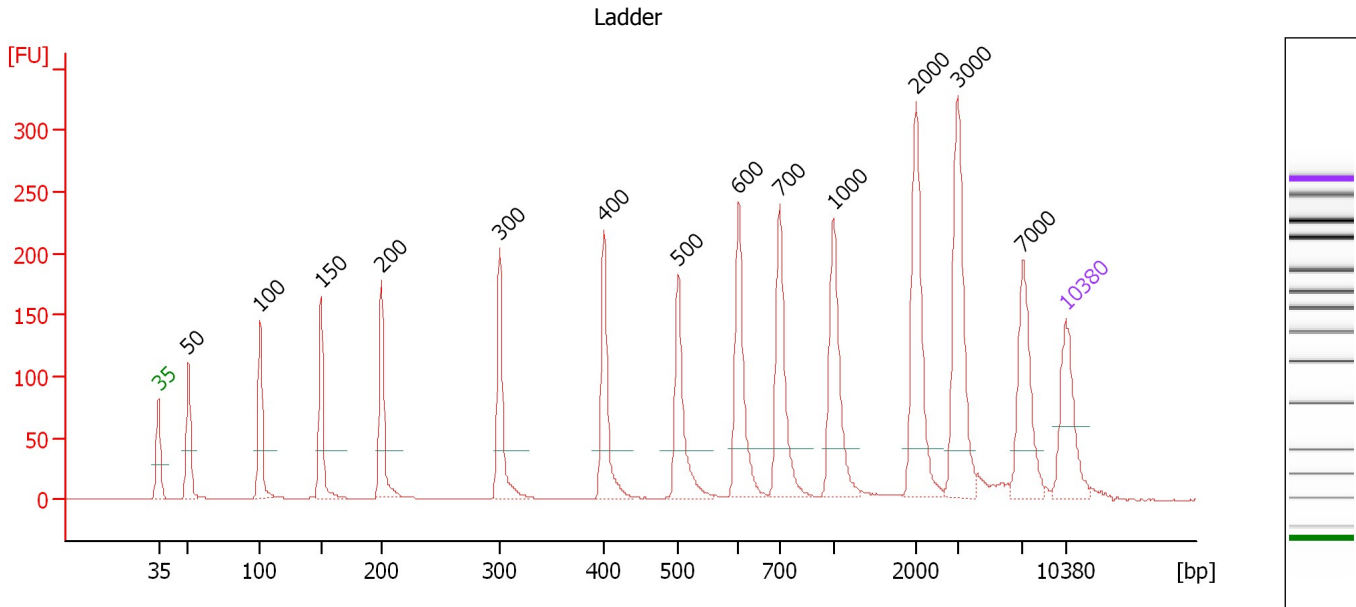
**Ladder**

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:\... bioanalyzer\2100 expert\data\2018-12-10\2018-12-10\_002.xad

Created: 12/10/2018 4:00:14 PM  
 Modified: 12/10/2018 4:42:53 PM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

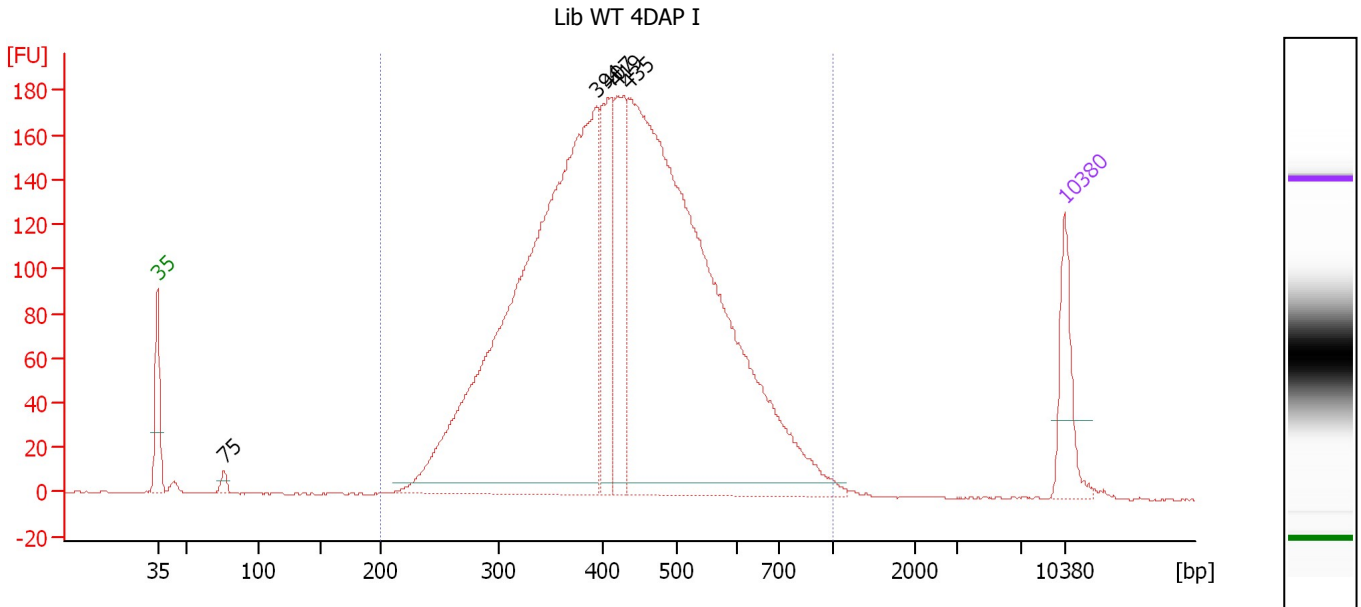
**Peak table for Ladder**

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	45.30
3	100	150.00	2,272.7	Ladder Peak	50.84
4	150	150.00	1,515.2	Ladder Peak	55.53
5	200	150.00	1,136.4	Ladder Peak	60.22
6	300	150.00	757.6	Ladder Peak	69.32
7	400	150.00	568.2	Ladder Peak	77.35
8	500	150.00	454.5	Ladder Peak	83.12
9	600	150.00	378.8	Ladder Peak	87.76
10	700	150.00	324.7	Ladder Peak	90.91
11	1,000	150.00	227.3	Ladder Peak	95.06
12	2,000	150.00	113.6	Ladder Peak	101.46
13	3,000	150.00	75.8	Ladder Peak	104.66
14	7,000	150.00	32.5	Ladder Peak	109.66
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-10\2018-12-10\_002.xad

Created: 12/10/2018 4:00:14 PM  
 Modified: 12/10/2018 4:42:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 1 : Lib WT 4DAP I**

Number of peaks found: 5                      Corr. Area 1: 3,969.4  
 Noise: 0.2

**Peak table for sample 1 : Lib WT 4DAP I**

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	75	14.13	283.6		48.12
3	394	1,462.75	5,624.8		76.87
4	407	213.48	793.9		77.77
5	419	213.52	771.8		78.45
6	435	1,544.57	5,381.1		79.36
7	10,380	75.00	10.9	Upper Marker	113.00

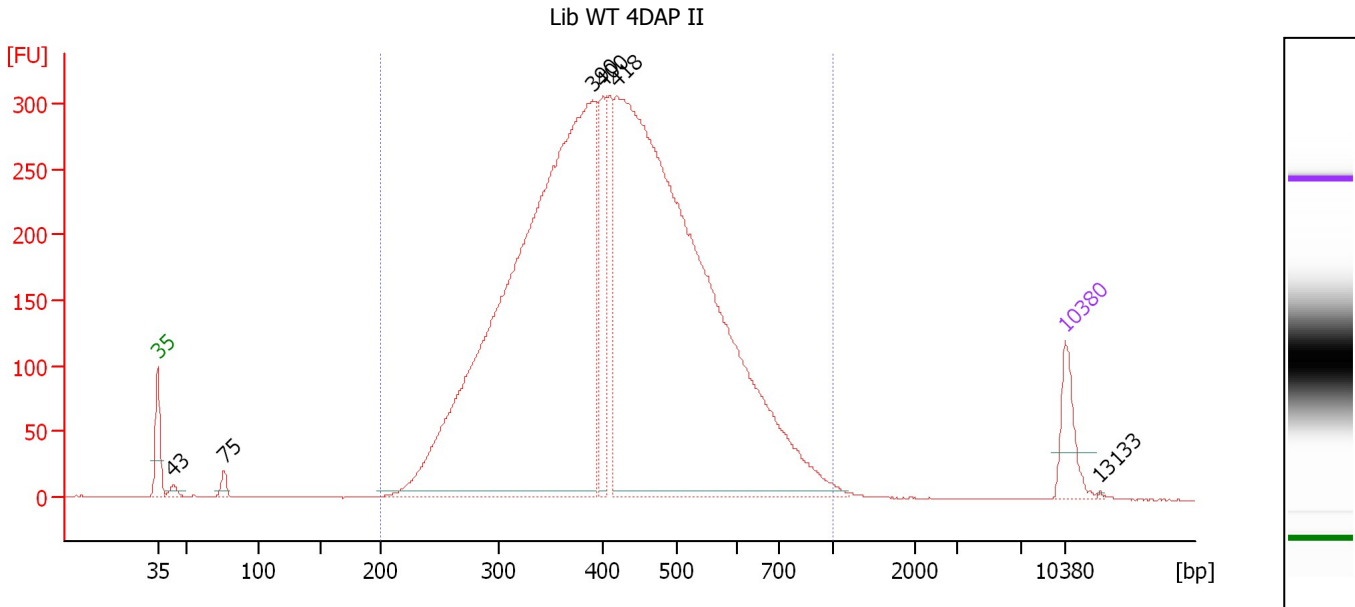
**Region table for sample 1 : Lib WT 4DAP I**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	1,000	438	3,538.13	3,969.4	13,413.8	99	26.6

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-10\2018-12-10\_002.xad

Created: 12/10/2018 4:00:14 PM  
 Modified: 12/10/2018 4:42:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 2 : Lib WT 4DAP II**

Number of peaks found: 6                      Corr. Area 1: 7,002.2  
 Noise: 0.2

**Peak table for sample 2 : Lib WT 4DAP II**

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	43	18.07	637.0		44.22
3	75	27.05	543.6		48.12
4	390	2,643.13	10,266.3		76.55
5	400	200.61	759.3		77.37
6	418	2,776.26	10,072.8		78.36
7	10,380	75.00	10.9	Upper Marker	113.00
8	13,133	0.00	0.0		115.72

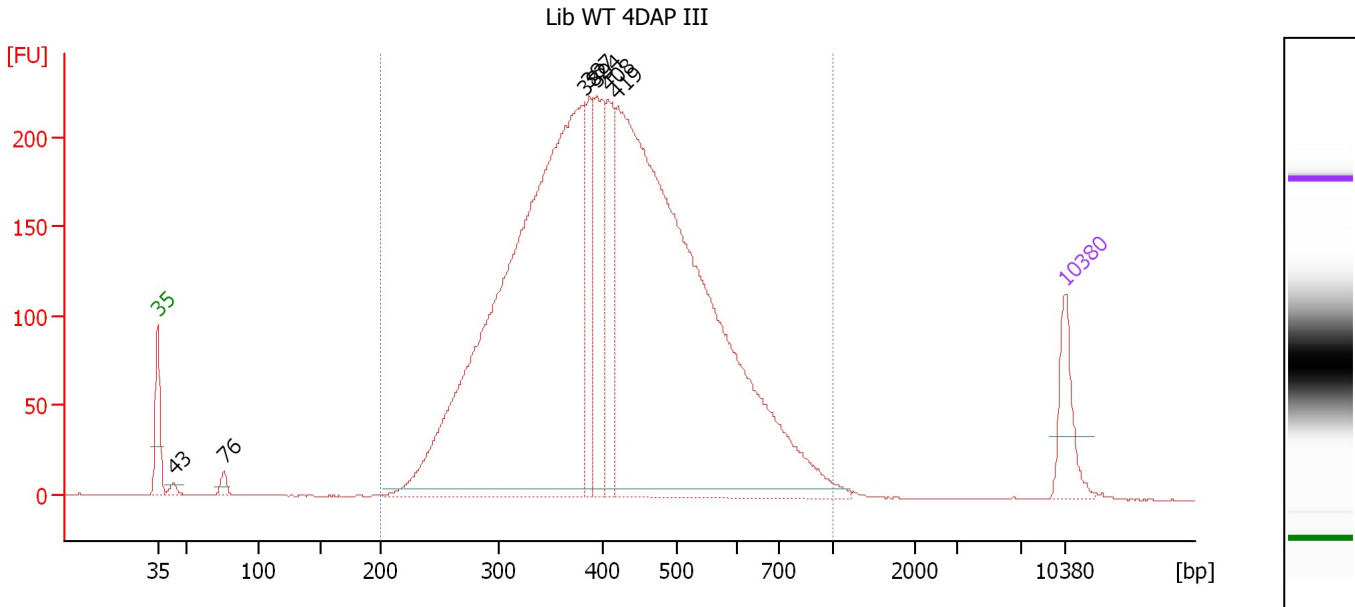
**Region table for sample 2 : Lib WT 4DAP II**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
200	1,000	429	6,018.46	7,002.2	23,316.6	99	26.9

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-10\2018-12-10\_002.xad

Created: 12/10/2018 4:00:14 PM  
 Modified: 12/10/2018 4:42:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : Lib WT 4DAP III**

Number of peaks found: 7                      Corr. Area 1: 5,064.6  
 Noise: 0.2

**Peak table for sample 3 : Lib WT 4DAP III**

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	43	13.12	461.3		44.24
3	76	19.33	387.3		48.14
4	382	1,871.11	7,413.4		75.94
5	387	156.94	614.5		76.30
6	394	238.09	914.6		76.90
7	408	196.55	729.6		77.82
8	419	1,956.48	7,070.1		78.46
9	10,380	75.00	10.9	Upper Marker	113.00

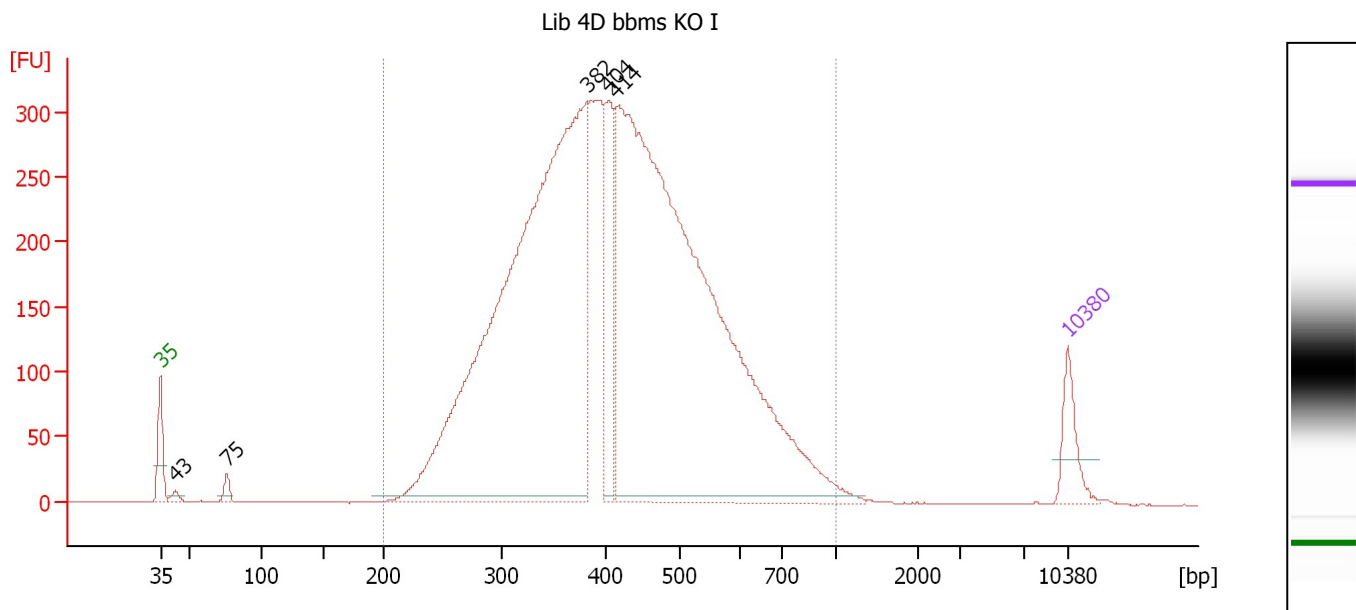
**Region table for sample 3 : Lib WT 4DAP III**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
200	1,000	426	4,517.32	5,064.6	17,663.8	99	27.3

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-10\2018-12-10\_002.xad

Created: 12/10/2018 4:00:14 PM  
 Modified: 12/10/2018 4:42:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : Lib 4D bbms KO I**

Number of peaks found: 5    Corr. Area 1: 7,112.5  
 Noise: 0.2

**Peak table for sample 4 : Lib 4D bbms KO I**

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	43	17.40	618.0		44.17
3	75	29.47	591.7		48.12
4	382	2,562.00	10,151.7		75.93
5	404	256.23	960.9		77.58
6	414	2,791.83	10,223.1		78.14
7	10,380	75.00	10.9	Upper Marker	113.00

**Region table for sample 4 : Lib 4D bbms KO I**

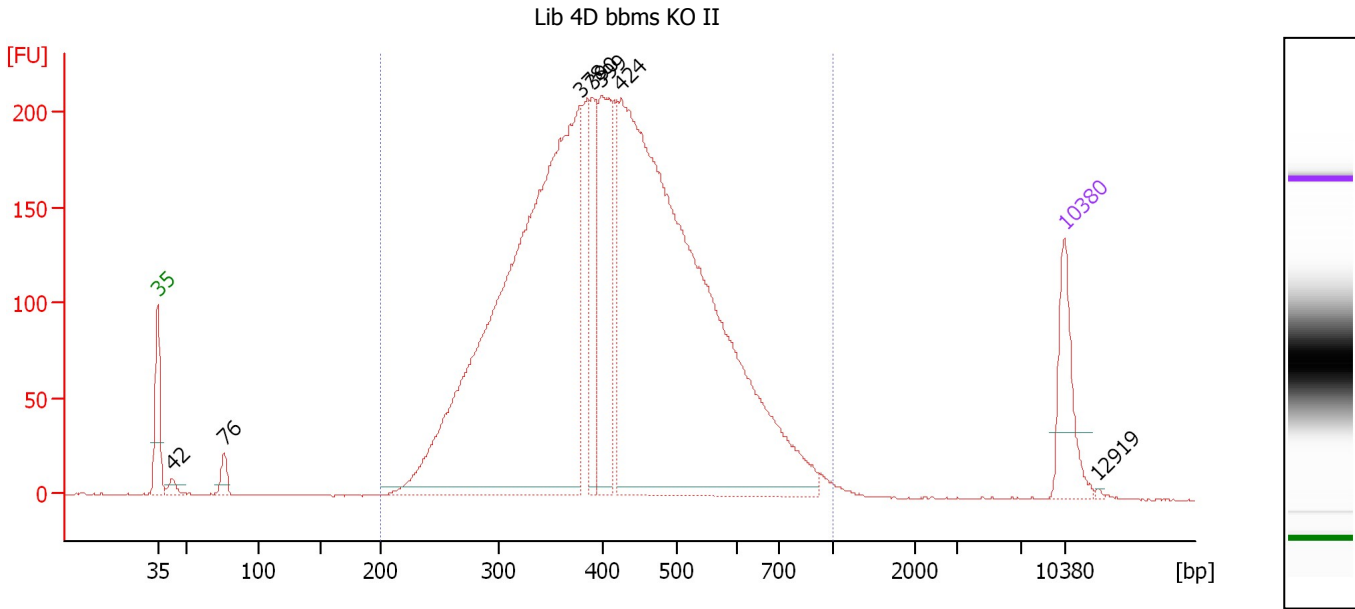
From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Total	Size distribution in CV [%]
200	1,000	427	6,156.06	7,112.5	24,047.1	99	27.6



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-10\2018-12-10\_002.xad

Created: 12/10/2018 4:00:14 PM  
 Modified: 12/10/2018 4:42:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : Lib 4D bbms KO II**

Number of peaks found: 7                      Corr. Area 1: 4,671.5  
 Noise: 0.2

**Peak table for sample 5 : Lib 4D bbms KO II**

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	42	14.55	521.9		44.11
3	76	25.94	518.9		48.15
4	378	1,358.38	5,438.7		75.62
5	390	125.45	486.8		76.58
6	399	236.92	900.0		77.25
7	424	1,452.32	5,186.5		78.75
8	10,380	75.00	10.9	Upper Marker	113.00
9	12,919	0.00	0.0		115.51

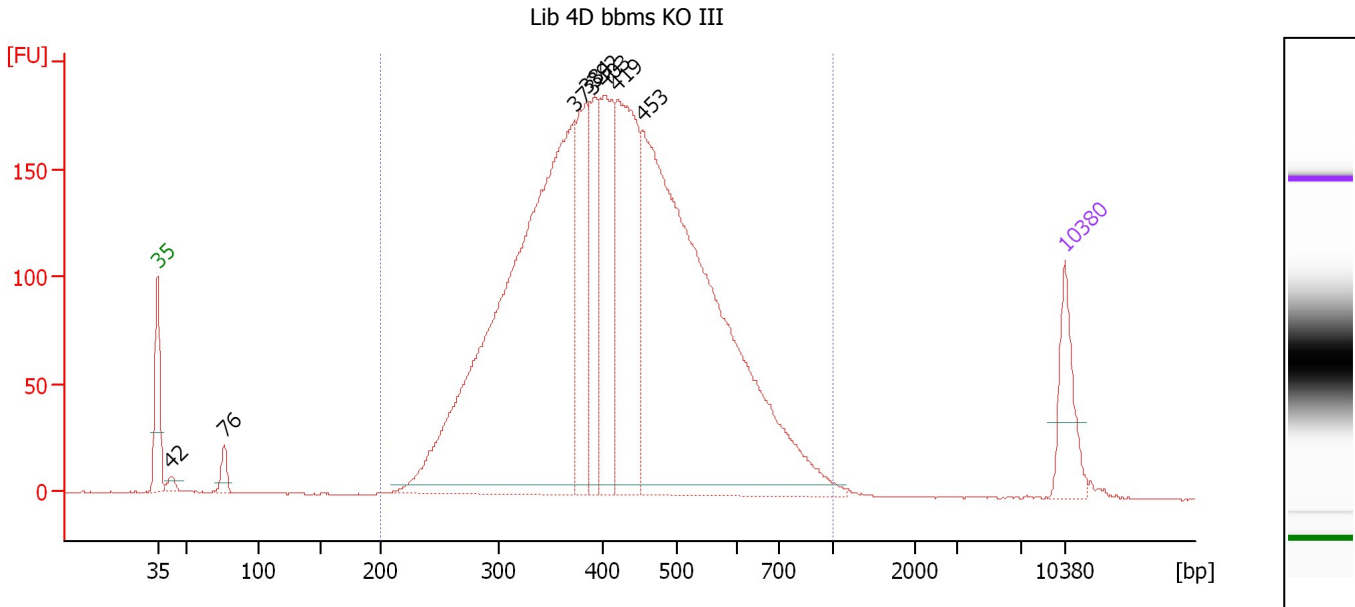
**Region table for sample 5 : Lib 4D bbms KO II**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
200	1,000	426	3,459.52	4,671.5	13,491.8	99	27.0

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-10\2018-12-10\_002.xad

Created: 12/10/2018 4:00:14 PM  
 Modified: 12/10/2018 4:42:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : Lib 4D bbms KO III**

Number of peaks found: 8                      Corr. Area 1: 4,096.4  
 Noise: 0.2

**Peak table for sample 6 : Lib 4D bbms KO III**

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	42	15.92	577.3		44.04
3	76	32.64	653.7		48.14
4	373	1,334.72	5,426.2		75.16
5	384	244.17	963.9		76.05
6	392	160.78	620.8		76.74
7	403	242.29	910.5		77.53
8	419	423.93	1,534.4		78.42
9	453	1,257.65	4,207.2		80.40
10	10,380	75.00	10.9	Upper Marker	113.00

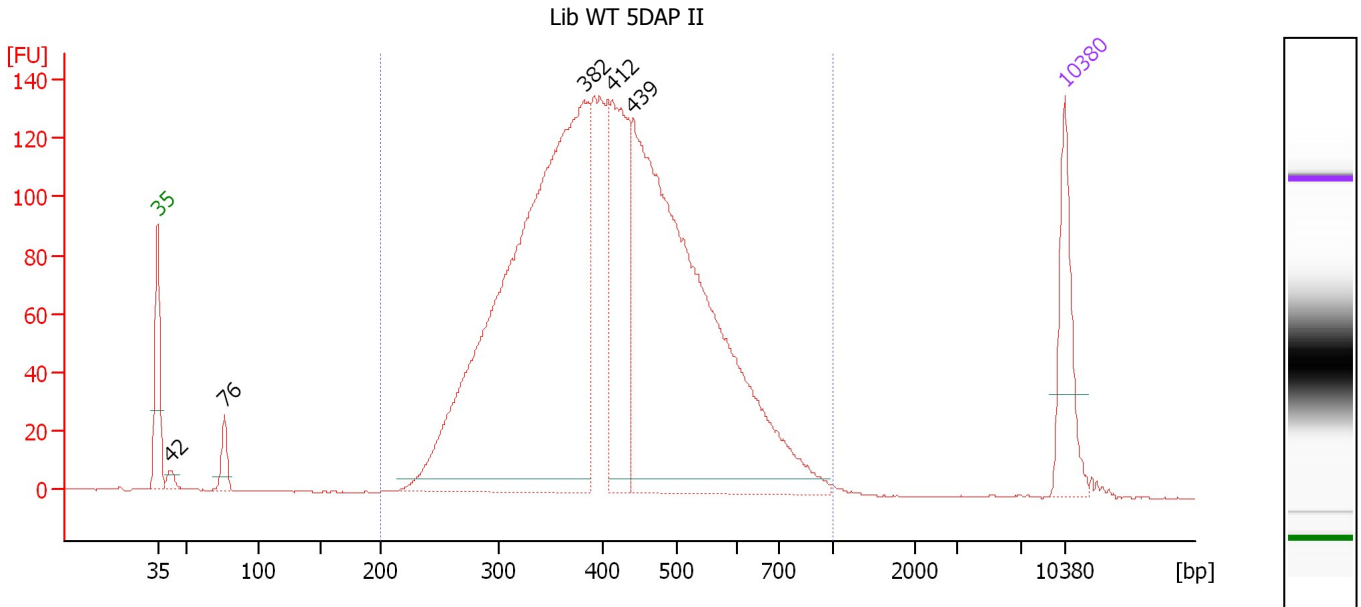
**Region table for sample 6 : Lib 4D bbms KO III**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	1,000	430	3,732.44	4,096.4	14,404.9	99	26.8

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-10\2018-12-10\_002.xad

Created: 12/10/2018 4:00:14 PM  
 Modified: 12/10/2018 4:42:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : Lib WT 5DAP II**

Number of peaks found: 5                      Corr. Area 1: 2,921.0  
 Noise: 0.2

**Peak table for sample 7 : Lib WT 5DAP II**

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	42	11.89	429.9		44.06
3	76	33.20	665.4		48.14
4	382	1,031.44	4,093.4		75.88
5	412	220.57	810.8		78.05
6	439	848.07	2,925.3		79.61
7	10,380	75.00	10.9	Upper Marker	113.00

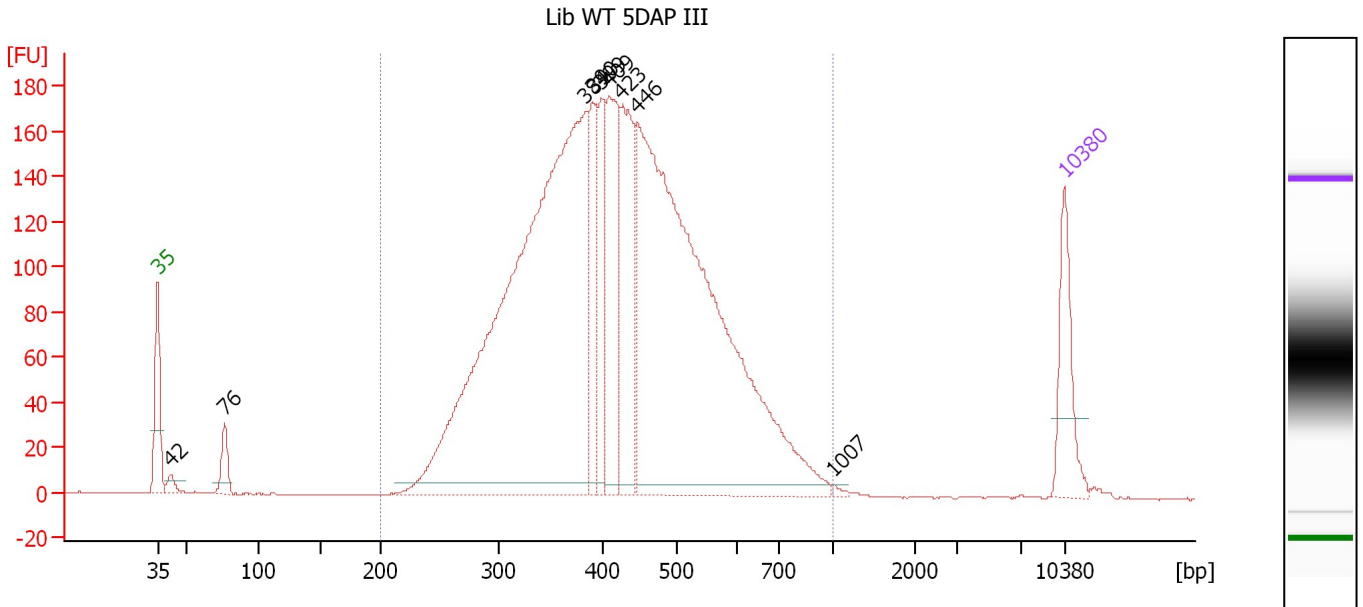
**Region table for sample 7 : Lib WT 5DAP II**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	1,000	424	2,362.51	2,921.0	9,213.2	98	26.1

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-10\2018-12-10\_002.xad

Created: 12/10/2018 4:00:14 PM  
 Modified: 12/10/2018 4:42:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : Lib WT 5DAP III**

Number of peaks found: 9                      Corr. Area 1: 3,775.7  
 Noise: 0.2

**Peak table for sample 8 : Lib WT 5DAP III**

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	42	14.77	536.9		44.03
3	76	39.36	784.8		48.18
4	384	1,224.35	4,836.7		76.03
5	390	118.85	461.8		76.54
6	399	117.91	447.9		77.26
7	409	189.00	700.0		77.87
8	423	206.70	739.8		78.69
9	446	1,085.43	3,683.8		80.03
10	1,007	2.95	4.4		95.10
11	10,380	75.00	10.9	Upper Marker	113.00

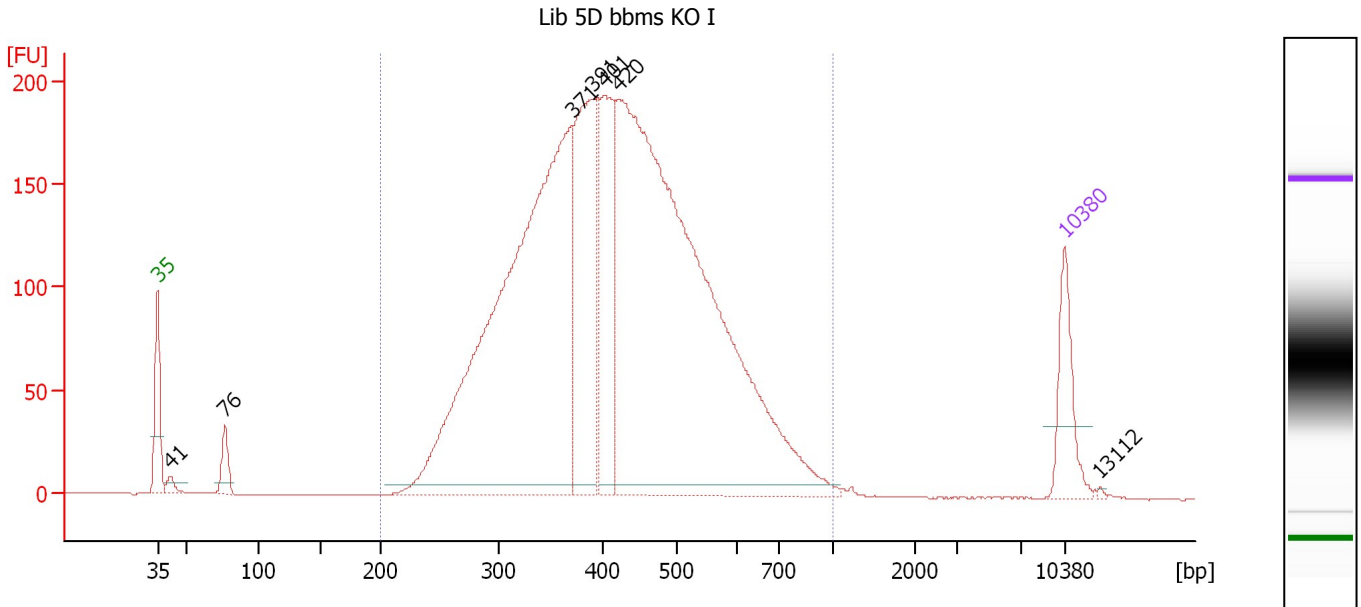
**Region table for sample 8 : Lib WT 5DAP III**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	1,000	430	3,035.37	3,775.7	11,678.8	98	26.3

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-10\2018-12-10\_002.xad

Created: 12/10/2018 4:00:14 PM  
 Modified: 12/10/2018 4:42:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : Lib 5D bbms KO I**

Number of peaks found: 7                      Corr. Area 1: 4,220.9  
 Noise: 0.1

**Peak table for sample 9 : Lib 5D bbms KO I**

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	41	17.83	652.1		43.99
3	76	45.78	906.8		48.24
4	371	1,310.36	5,356.3		74.99
5	391	391.29	1,517.5		76.60
6	401	239.95	905.6		77.43
7	420	1,638.57	5,906.7		78.52
8	10,380	75.00	10.9	Upper Marker	113.00
9	13,112	0.00	0.0		115.70

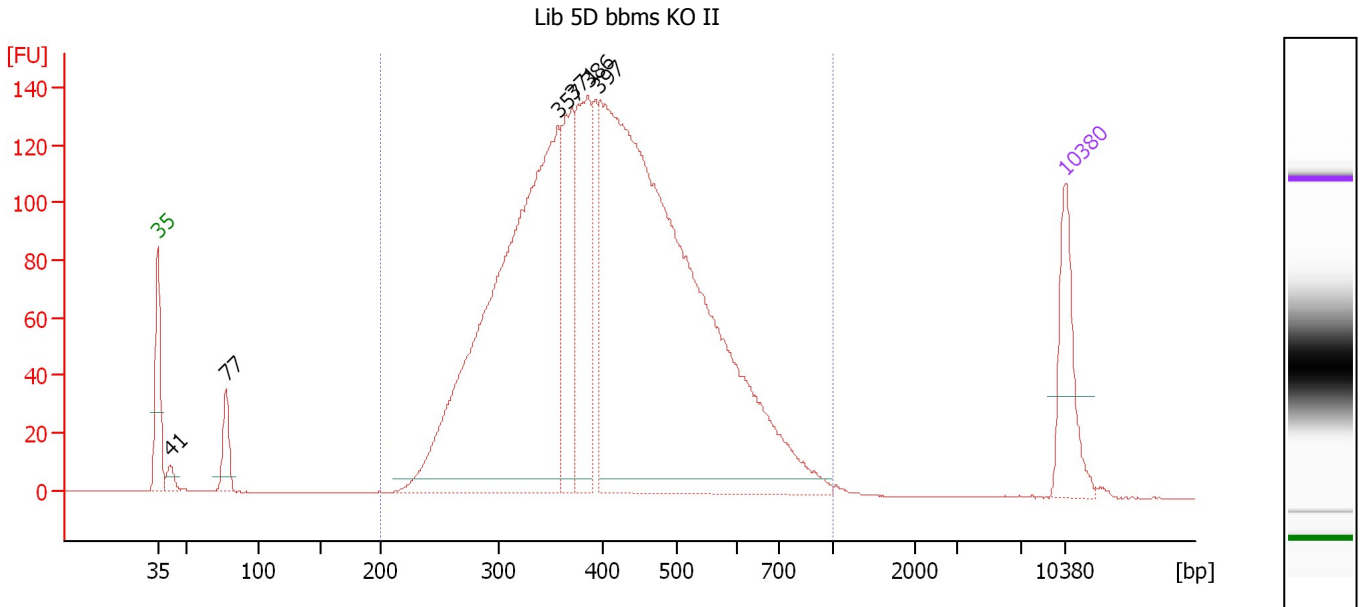
**Region table for sample 9 : Lib 5D bbms KO I**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of lor Total	Size distribution in CV [%]
200	1,000	427	3,677.37	4,220.9	14,253.7	98	26.4

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-10\2018-12-10\_002.xad

Created: 12/10/2018 4:00:14 PM  
 Modified: 12/10/2018 4:42:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : Lib 5D bbms KO II**

Number of peaks found: 6                      Corr. Area 1: 2,988.4  
 Noise: 0.2

**Peak table for sample 10 : Lib 5D bbms KO II**

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	41	17.55	641.3		43.99
3	77	52.17	1,029.9		48.26
4	357	942.79	3,999.6		73.91
5	371	156.55	639.7		75.00
6	386	206.42	810.8		76.20
7	397	1,328.04	5,071.3		77.09
8	10,380	75.00	10.9	Upper Marker	113.00

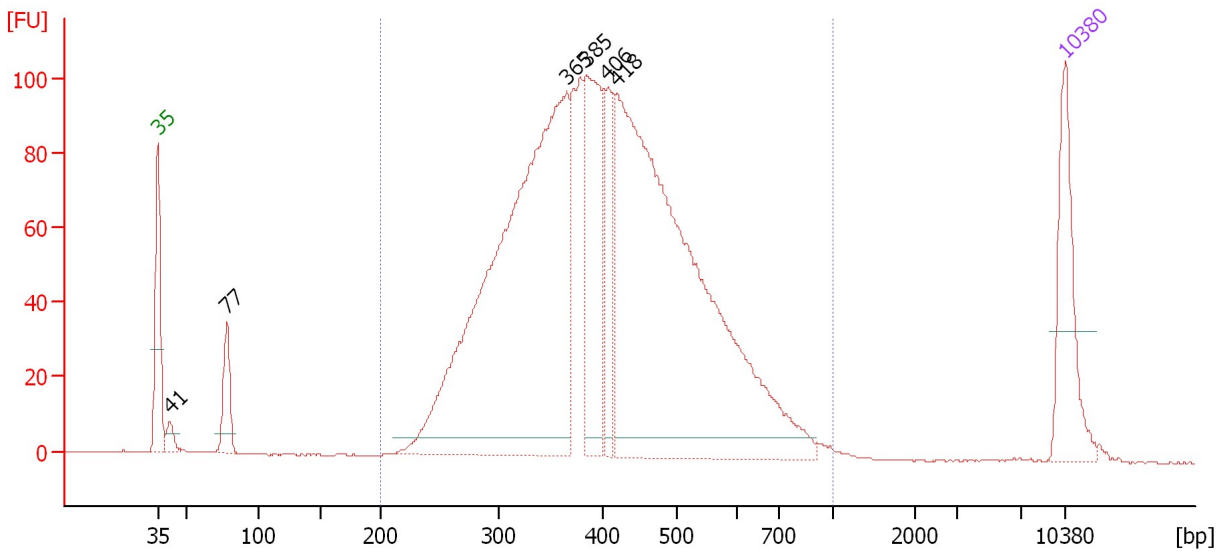
**Region table for sample 10 : Lib 5D bbms KO II**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
200	1,000	420	2,723.34	2,988.4	10,748.4	97	26.7

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-10\2018-12-10\_002.xad

Created: 12/10/2018 4:00:14 PM  
 Modified: 12/10/2018 4:42:53 PM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 :**

Number of peaks found: 6                      Corr. Area 1: 2,159.5  
 Noise: 0.2

**Peak table for sample 11 :**

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	41	15.23	560.6		43.94
3	77	50.15	980.9		48.34
4	365	740.08	3,071.8		74.54
5	385	173.87	684.9		76.11
6	406	73.40	274.0		77.69
7	418	759.90	2,756.5		78.37
8	10,380	75.00	10.9	Upper Marker	113.00

**Region table for sample 11 :**

From [bp]	To [bp]	Average Size [bp]	Conc. [pg/μl]	Corr. Area	Molarity [pmol/l]	Co % of Ior Total	Size distribution in CV [%]
200	1,000	416	1,924.69	2,159.5	7,637.7	97	26.3

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2018-12-10\2018-12-10\_002.xad

Created: 12/10/2018 4:00:14 PM  
Modified: 12/10/2018 4:42:53 PM

**Gel Image**

