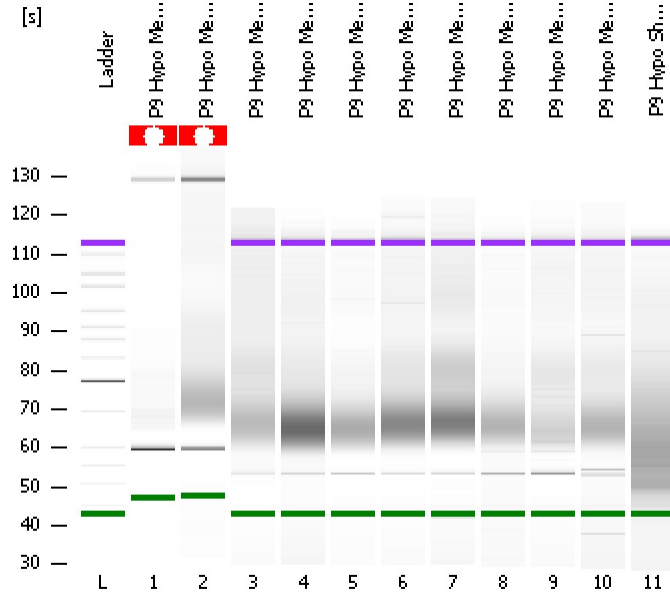


Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-29\2016-09-29\_001.xad

Created: 9/29/2016 10:06:36 AM  
Modified: 9/29/2016 10:48:27 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

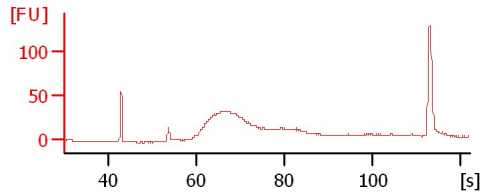
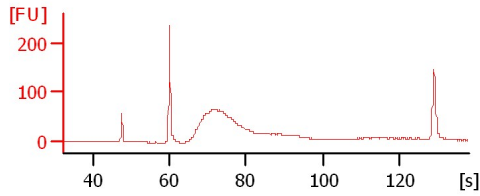
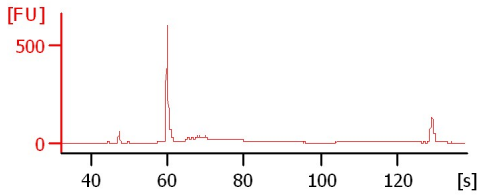
Chip Information:

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

**P9 Hypo Methyl-Seq 1**

**P9 Hypo Methyl-Seq 2**

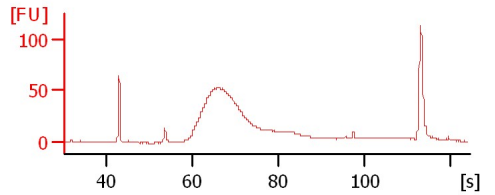
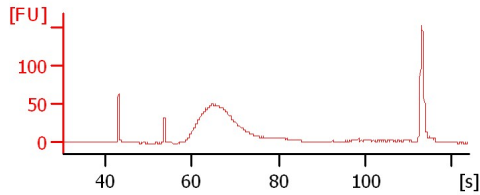
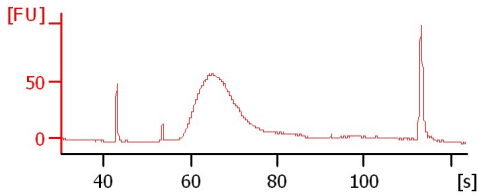
**P9 Hypo Methyl-Seq 3**



**P9 Hypo Methyl-Seq 4**

**P9 Hypo Methyl-Seq 5**

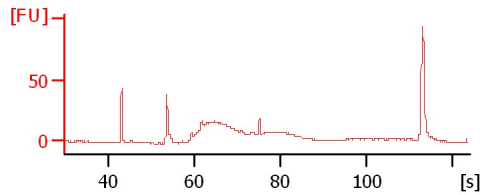
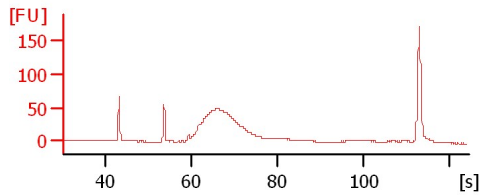
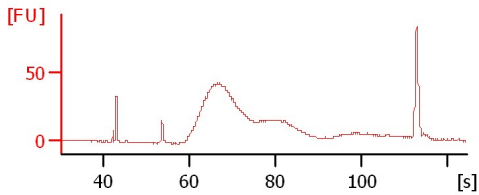
**P9 Hypo Methyl-Seq 6**



**P9 Hypo Methyl-Seq 7**

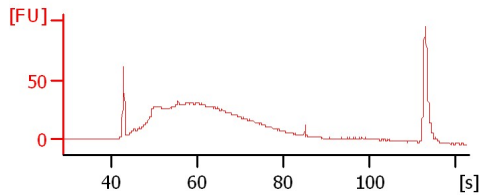
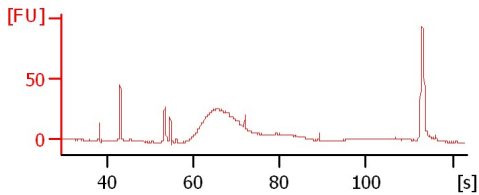
**P9 Hypo Methyl-Seq 9**

**P9 Hypo Methyl-Seq 10**



**P9 Hypo Methyl-Seq 11**

**P9 Hypo Sheared DNA 10**



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-29\2016-09-29\_001.xad

Created: 9/29/2016 10:06:36 AM  
 Modified: 9/29/2016 10:48:27 AM

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

Sample Name	Sample Comment	Rest. Digest	Status	Observation	Result Label	Result Color
P9 Hypo Methyl-Seq 1		<input type="checkbox"/>	✓			
P9 Hypo Methyl-Seq 2		<input type="checkbox"/>	✓			
P9 Hypo Methyl-Seq 3		<input type="checkbox"/>	✓			
P9 Hypo Methyl-Seq 4		<input type="checkbox"/>	✓			
P9 Hypo Methyl-Seq 5		<input type="checkbox"/>	✓			
P9 Hypo Methyl-Seq 6		<input type="checkbox"/>	✓			
P9 Hypo Methyl-Seq 7		<input type="checkbox"/>	✓			
P9 Hypo Methyl-Seq 9		<input type="checkbox"/>	✓			
P9 Hypo Methyl-Seq 10		<input type="checkbox"/>	✓			
P9 Hypo Methyl-Seq 11		<input type="checkbox"/>	✓			
P9 Hypo Sheared DNA 10		<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\2016-09-29\2016-09-29\_001.xad

Created: 9/29/2016 10:06:36 AM  
Modified: 9/29/2016 10:48:27 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/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

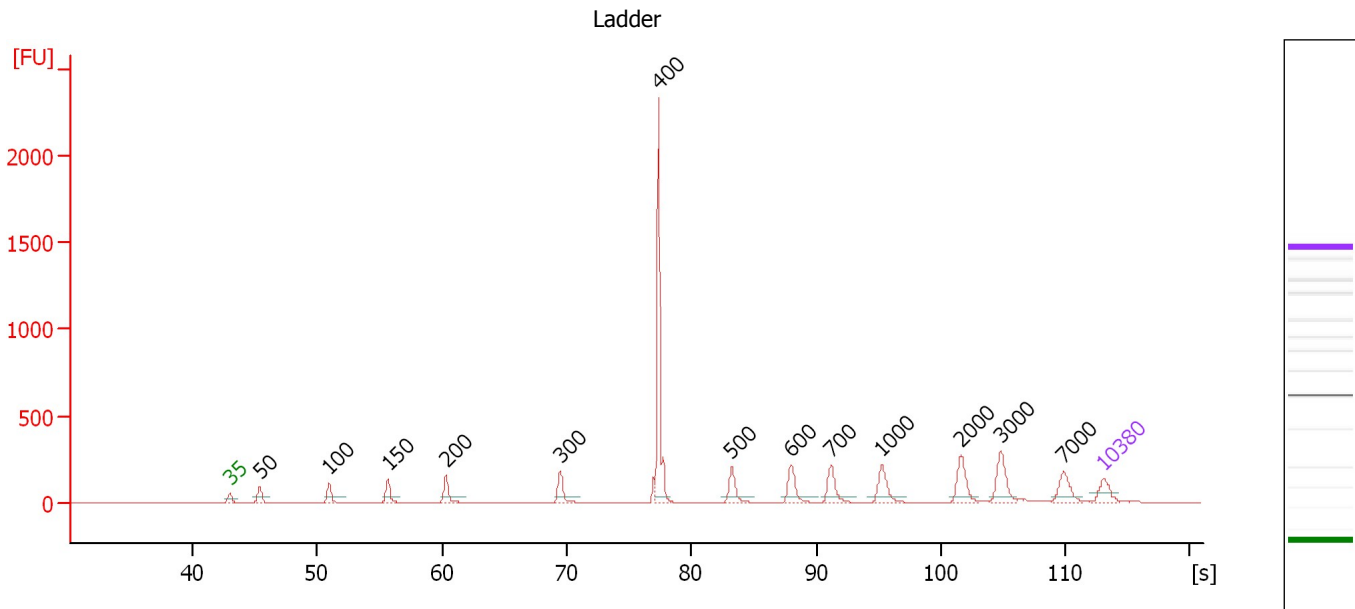
**Ladder**

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\2016-09-29\2016-09-29\_001.xad

Created: 9/29/2016 10:06:36 AM  
 Modified: 9/29/2016 10:48:27 AM

**Electropherogram Summary**



**Overall Results for Ladder**

Noise: 0.2

**Peak table for Ladder**

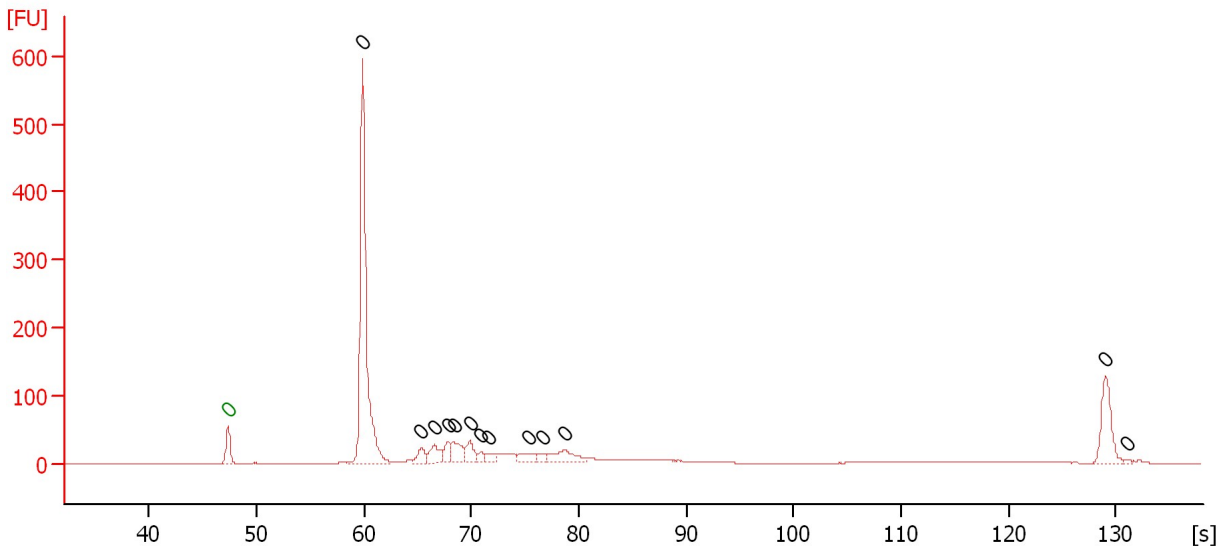
Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	35	125.00	5,411.3	Lower Marker	43.00
2	50	150.00	4,545.5	Ladder Peak	45.36
3	100	150.00	2,272.7	Ladder Peak	50.97
4	150	150.00	1,515.2	Ladder Peak	55.64
5	200	150.00	1,136.4	Ladder Peak	60.31
6	300	150.00	757.6	Ladder Peak	69.47
7	400	150.00	568.2	Ladder Peak	77.36
8	500	150.00	454.5	Ladder Peak	83.23
9	600	150.00	378.8	Ladder Peak	87.98
10	700	150.00	324.7	Ladder Peak	91.19
11	1,000	150.00	227.3	Ladder Peak	95.26
12	2,000	150.00	113.6	Ladder Peak	101.60
13	3,000	150.00	75.8	Ladder Peak	104.82
14	7,000	150.00	32.5	Ladder Peak	109.83
15	10,380	75.00	10.9	Upper Marker	113.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-29\2016-09-29\_001.xad

Created: 9/29/2016 10:06:36 AM  
 Modified: 9/29/2016 10:48:27 AM

**Electropherogram Summary Continued ...**

P9 Hypo Methyl-Seq 1



**Overall Results for sample 1 : P9 Hypo Methyl-Seq 1**

Number of peaks found: 13                      Noise: 0.2

**Peak table for sample 1 : P9 Hypo Methyl-Seq 1**

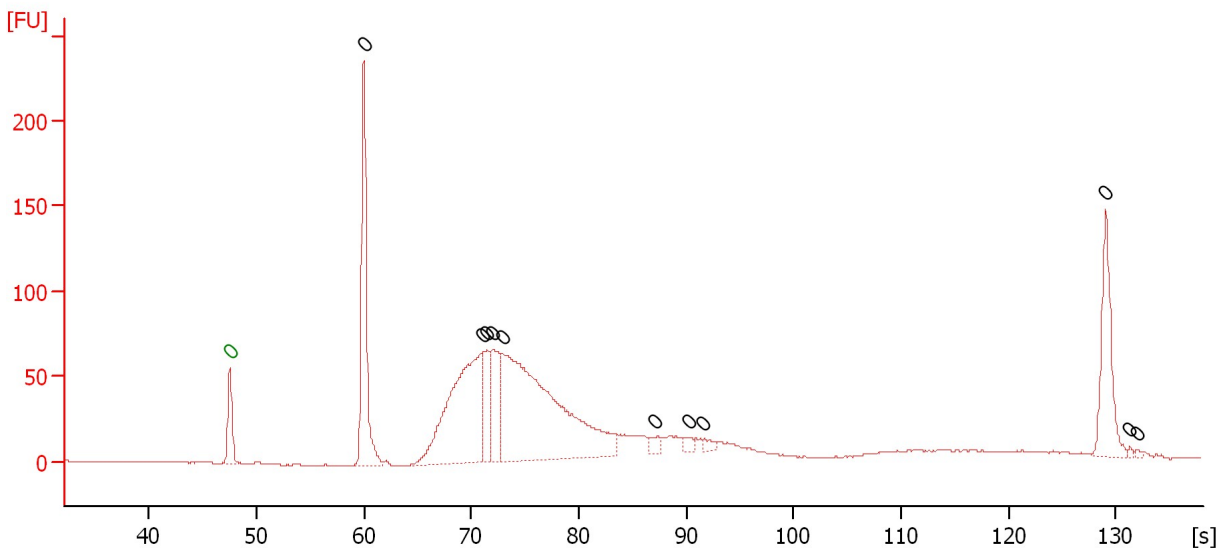
Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	0	0.00	0.0	Lower Marker	47.35
2	0	0.00	0.0		59.90
3	0	0.00	0.0		65.35
4	0	0.00	0.0		66.55
5	0	0.00	0.0		67.80
6	0	0.00	0.0		68.35
7	0	0.00	0.0		69.85
8	0	0.00	0.0		70.85
9	0	0.00	0.0		71.55
10	0	0.00	0.0		75.35
11	0	0.00	0.0		76.55
12	0	0.00	0.0		78.65
13	0	0.00	0.0		129.05
14	0	0.00	0.0		131.00

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-29\2016-09-29\_001.xad

Created: 9/29/2016 10:06:36 AM  
 Modified: 9/29/2016 10:48:27 AM

**Electropherogram Summary Continued ...**

P9 Hypo Methyl-Seq 2



**Overall Results for sample 2 : P9 Hypo Methyl-Seq 2**

Number of peaks found: 11                      Noise: 0.3

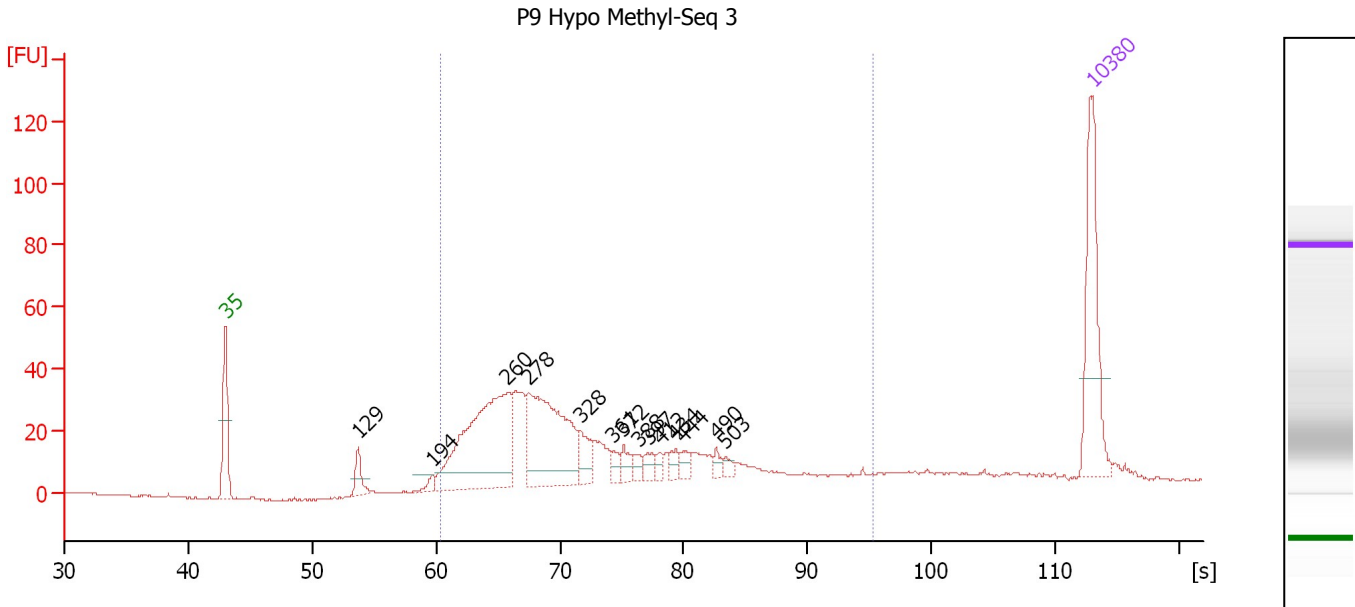
**Peak table for sample 2 : P9 Hypo Methyl-Seq 2**

Peak	Size [bp]	Conc. [pg/μl]	Molarity [pmol/l]	Observations	Aligned Migration Time [s]
1	0	0.00	0.0	Lower Marker	47.50
2	0	0.00	0.0		60.00
3	0	0.00	0.0		71.05
4	0	0.00	0.0		71.45
5	0	0.00	0.0		71.95
6	0	0.00	0.0		72.85
7	0	0.00	0.0		87.05
8	0	0.00	0.0		90.20
9	0	0.00	0.0		91.55
10	0	0.00	0.0		129.10
11	0	0.00	0.0		131.30
12	0	0.00	0.0		131.95

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-29\2016-09-29\_001.xad

Created: 9/29/2016 10:06:36 AM  
 Modified: 9/29/2016 10:48:27 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 3 : P9 Hypo Methyl-Seq 3**

Number of peaks found: 14                      Corr. Area 1: 651.4  
 Noise: 0.2

**Peak table for sample 3 : P9 Hypo Methyl-Seq 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	129	21.17	248.0		53.71
3	194	6.88	53.8		59.74
4	260	213.65	1,247.0		65.77
5	278	165.50	903.4		67.42
6	328	26.35	121.8		71.67
7	361	8.80	36.9		74.31
8	372	11.72	47.8		75.14
9	388	7.32	28.6		76.44
10	397	9.41	35.9		77.13
11	412	6.71	24.7		78.09
12	434	8.60	30.0		79.34
13	444	8.34	28.4		79.95
14	490	6.36	19.7		82.64
15	503	5.35	16.1		83.38
16	10,380	75.00	10.9	Upper Marker	113.00

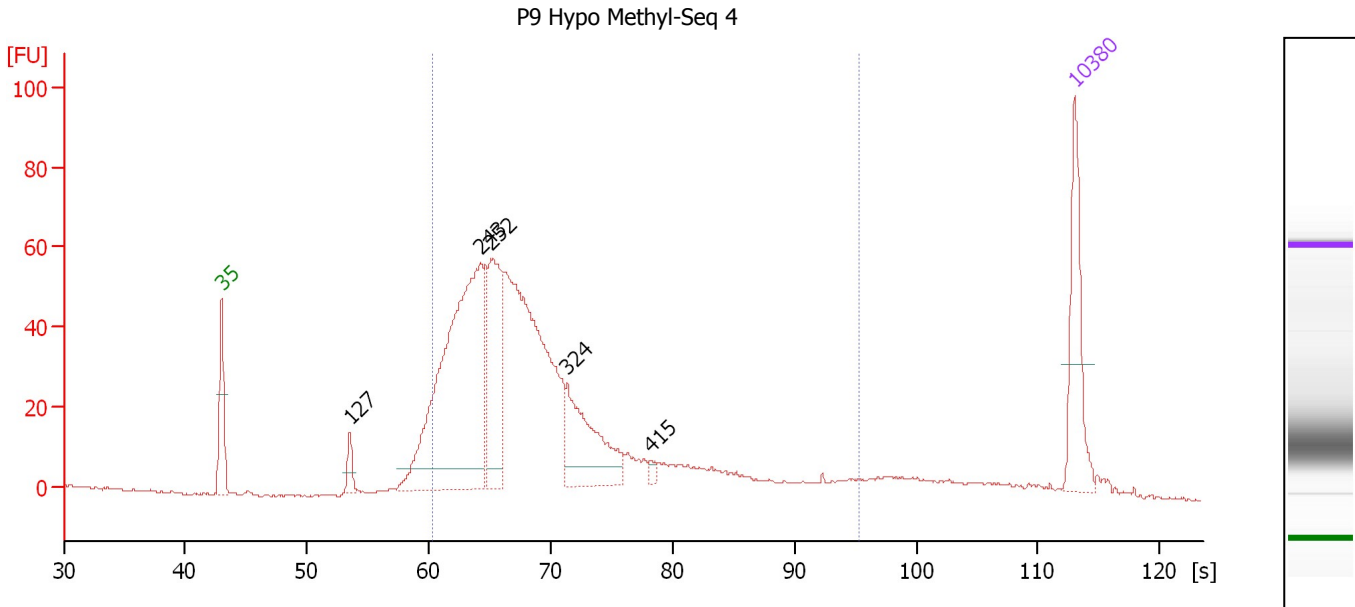
**Region table for sample 3 : P9 Hypo Methyl-Seq 3**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	347	651.4	3,268.7	652.90	90	38.1

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-29\2016-09-29\_001.xad

Created: 9/29/2016 10:06:36 AM  
 Modified: 9/29/2016 10:48:27 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 4 : P9 Hypo Methyl-Seq 4**

Number of peaks found: 5                      Corr. Area 1: 1,004.2  
 Noise: 0.3

**Peak table for sample 4 : P9 Hypo Methyl-Seq 4**

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	127	22.73	270.2		53.54
3	243	511.41	3,182.8		64.29
4	252	161.44	970.2		65.08
5	324	132.75	620.3		71.39
6	415	6.72	24.6		78.22
7	10,380	75.00	10.9	Upper Marker	113.00

**Region table for sample 4 : P9 Hypo Methyl-Seq 4**

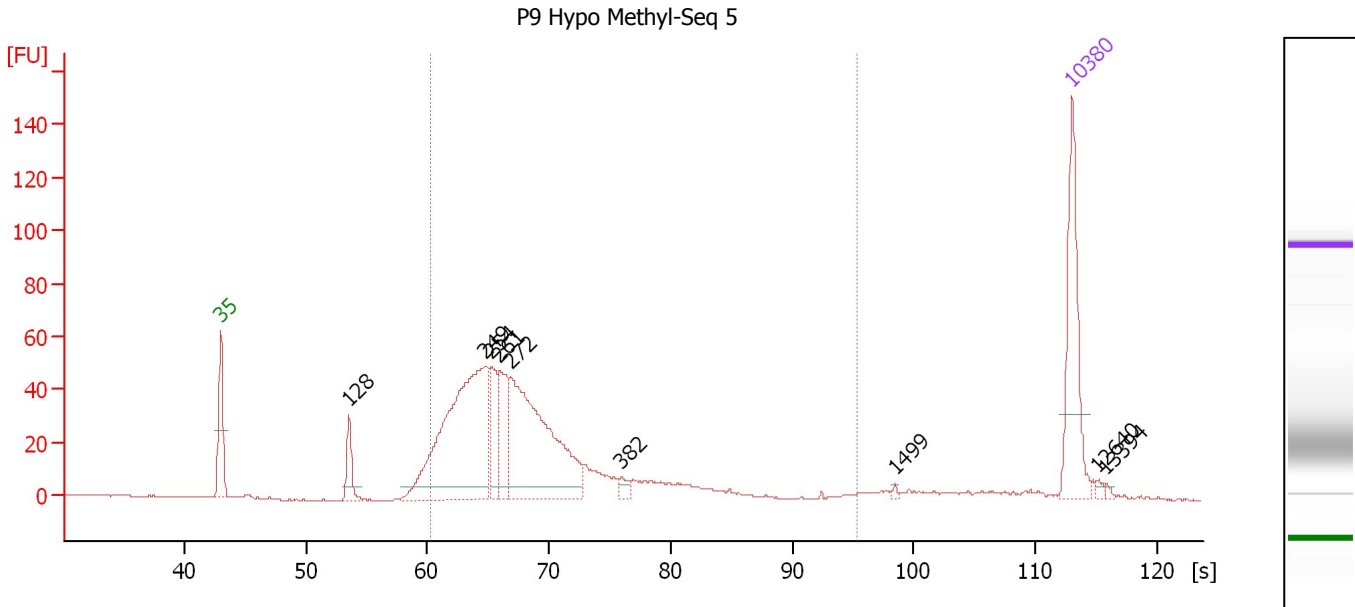
From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	312	1,004.2	7,741.9	1,422.95	88	38.9



Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-29\2016-09-29\_001.xad

Created: 9/29/2016 10:06:36 AM  
 Modified: 9/29/2016 10:48:27 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 5 : P9 Hypo Methyl-Seq 5**

Number of peaks found: 9                      Corr. Area 1: 775.0  
 Noise: 0.2

**Peak table for sample 5 : P9 Hypo Methyl-Seq 5**

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	128	32.91	390.5		53.56
3	249	307.59	1,873.8		64.77
4	254	48.66	290.8		65.21
5	261	58.37	338.6		65.92
6	272	247.22	1,378.0		66.89
7	382	7.87	31.2		75.95
8	1,499	1.39	1.4		98.43
9	10,380	75.00	10.9	Upper Marker	113.00
10	12,640	0.00	0.0		115.12
11	13,394	0.00	0.0		115.83

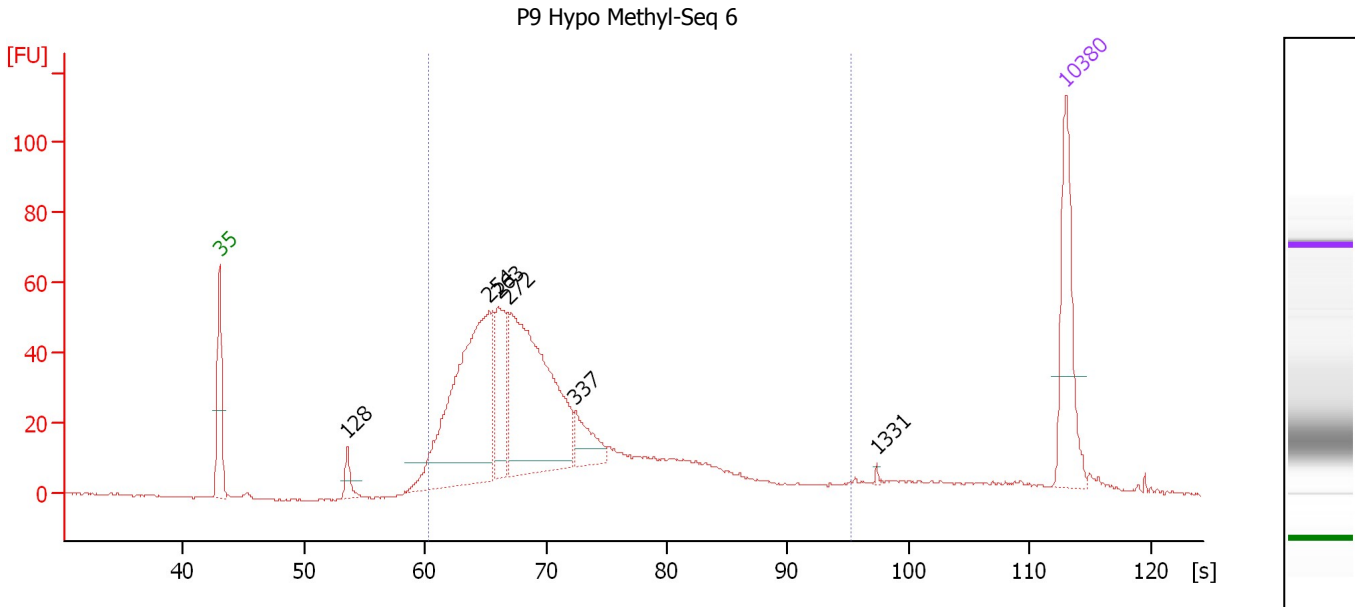
**Region table for sample 5 : P9 Hypo Methyl-Seq 5**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	291	775.0	3,977.8	714.09	88	29.6

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-29\2016-09-29\_001.xad

Created: 9/29/2016 10:06:36 AM  
 Modified: 9/29/2016 10:48:27 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 6 : P9 Hypo Methyl-Seq 6**

Number of peaks found: 6                      Corr. Area 1: 948.3  
 Noise: 0.2

**Peak table for sample 6 : P9 Hypo Methyl-Seq 6**

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	128	20.96	248.3		53.57
3	254	323.91	1,928.9		65.30
4	263	84.73	487.9		66.10
5	272	314.60	1,753.3		66.90
6	337	38.99	175.2		72.40
7	1,331	1.26	1.4		97.37
8	10,380	75.00	10.9	Upper Marker	113.00

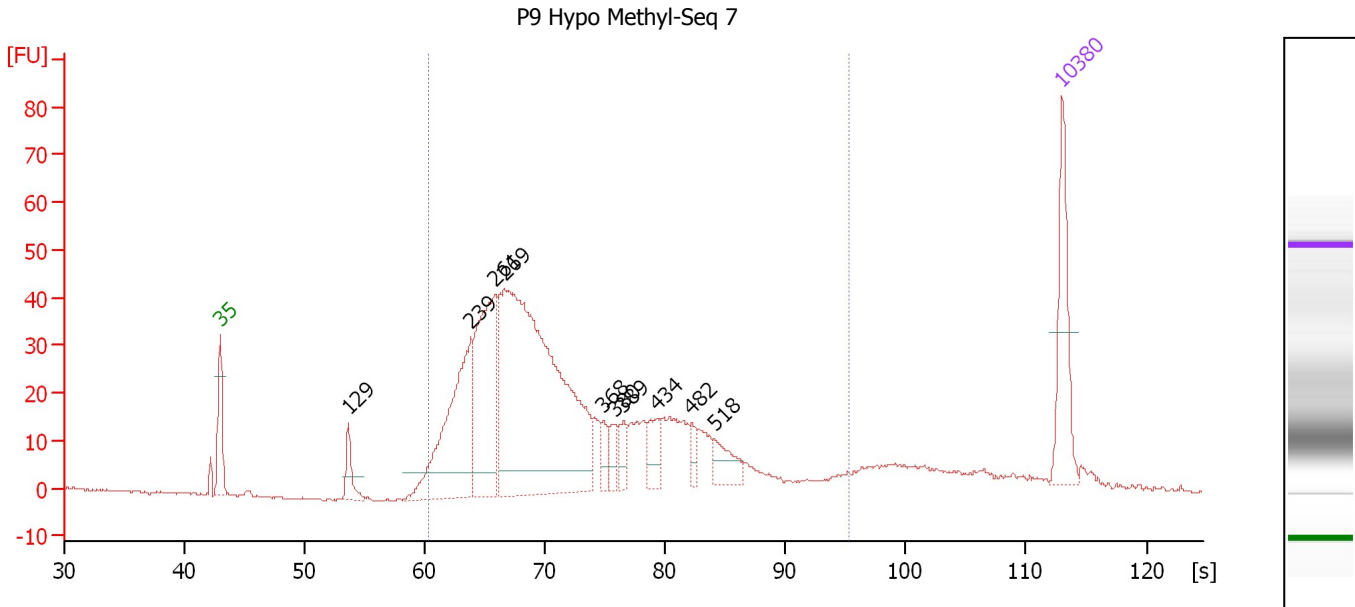
**Region table for sample 6 : P9 Hypo Methyl-Seq 6**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	322	948.3	5,556.5	1,060.89	91	35.5

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-29\2016-09-29\_001.xad

Created: 9/29/2016 10:06:36 AM  
 Modified: 9/29/2016 10:48:27 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 7 : P9 Hypo Methyl-Seq 7**

Number of peaks found: 10                      Corr. Area 1: 810.9  
 Noise: 0.2

**Peak table for sample 7 : P9 Hypo Methyl-Seq 7**

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	129	38.18	448.7		53.67
3	239	250.78	1,592.4		63.85
4	261	235.93	1,369.5		65.90
5	269	719.94	4,050.5		66.66
6	368	19.33	79.6		74.83
7	380	20.93	83.5		75.77
8	389	22.16	86.2		76.53
9	434	31.31	109.4		79.34
10	482	15.05	47.3		82.20
11	518	33.36	97.6		84.07
12	10,380	75.00	10.9	Upper Marker	113.00

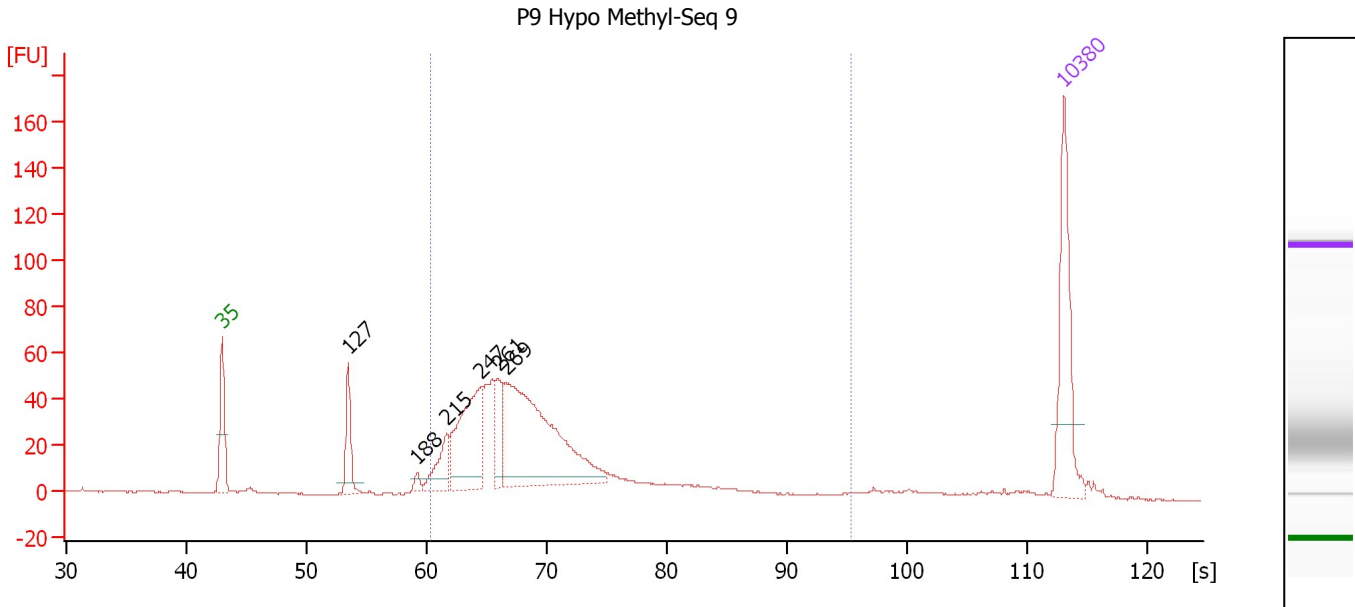
**Region table for sample 7 : P9 Hypo Methyl-Seq 7**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. lor [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	344	810.9	7,438.6	1,495.02	89	35.3

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-29\2016-09-29\_001.xad

Created: 9/29/2016 10:06:36 AM  
 Modified: 9/29/2016 10:48:27 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 8 : P9 Hypo Methyl-Seq 9**

Number of peaks found: 6                      Corr. Area 1: 794.9  
 Noise: 0.2

**Peak table for sample 8 : P9 Hypo Methyl-Seq 9**

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	127	50.84	606.1		53.50
3	188	6.90	55.6		59.22
4	215	40.70	287.0		61.67
5	247	128.84	791.7		64.58
6	261	43.43	252.0		65.92
7	269	272.59	1,535.5		66.63
8	10,380	75.00	10.9	Upper Marker	113.00

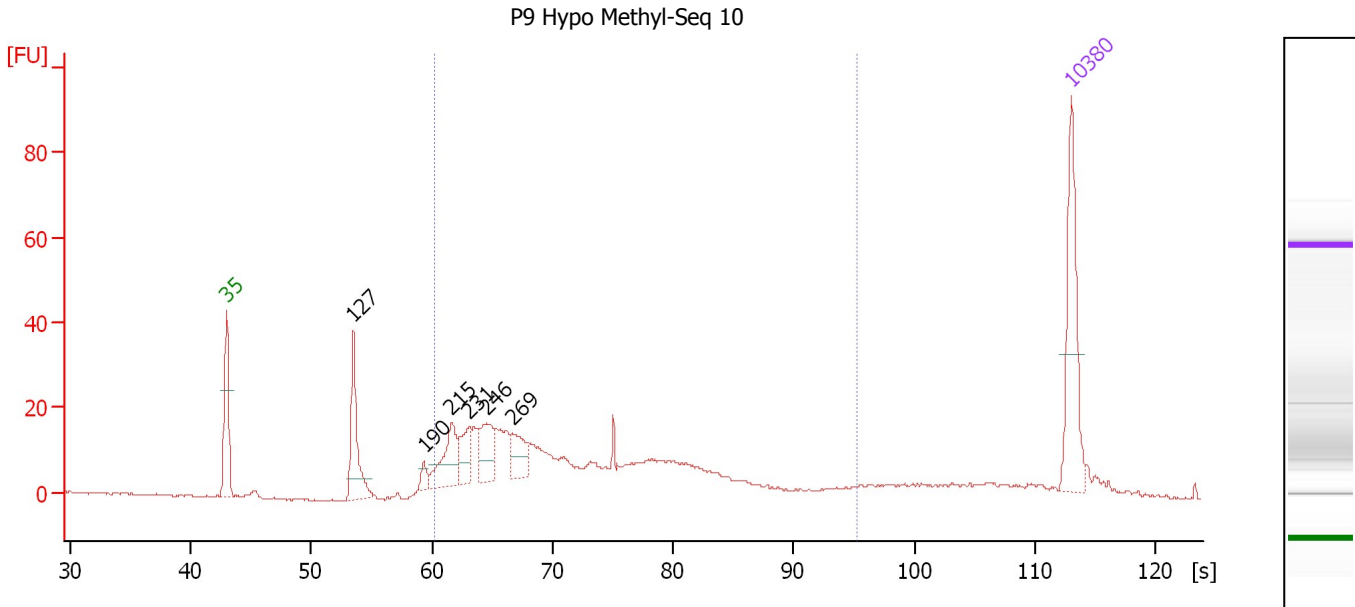
**Region table for sample 8 : P9 Hypo Methyl-Seq 9**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	304	794.9	3,533.5	655.04	86	32.1

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-29\2016-09-29\_001.xad

Created: 9/29/2016 10:06:36 AM  
 Modified: 9/29/2016 10:48:27 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 9 : P9 Hypo Methyl-Seq 10**

Number of peaks found: 6                      Corr. Area 1: 293.3  
 Noise: 0.2

**Peak table for sample 9 : P9 Hypo Methyl-Seq 10**

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	127	88.95	1,060.1		53.50
3	190	11.86	94.8		59.33
4	215	59.75	421.8		61.65
5	231	35.72	234.7		63.11
6	246	47.82	294.4		64.54
7	269	33.91	190.7		66.67
8	10,380	75.00	10.9	Upper Marker	113.00

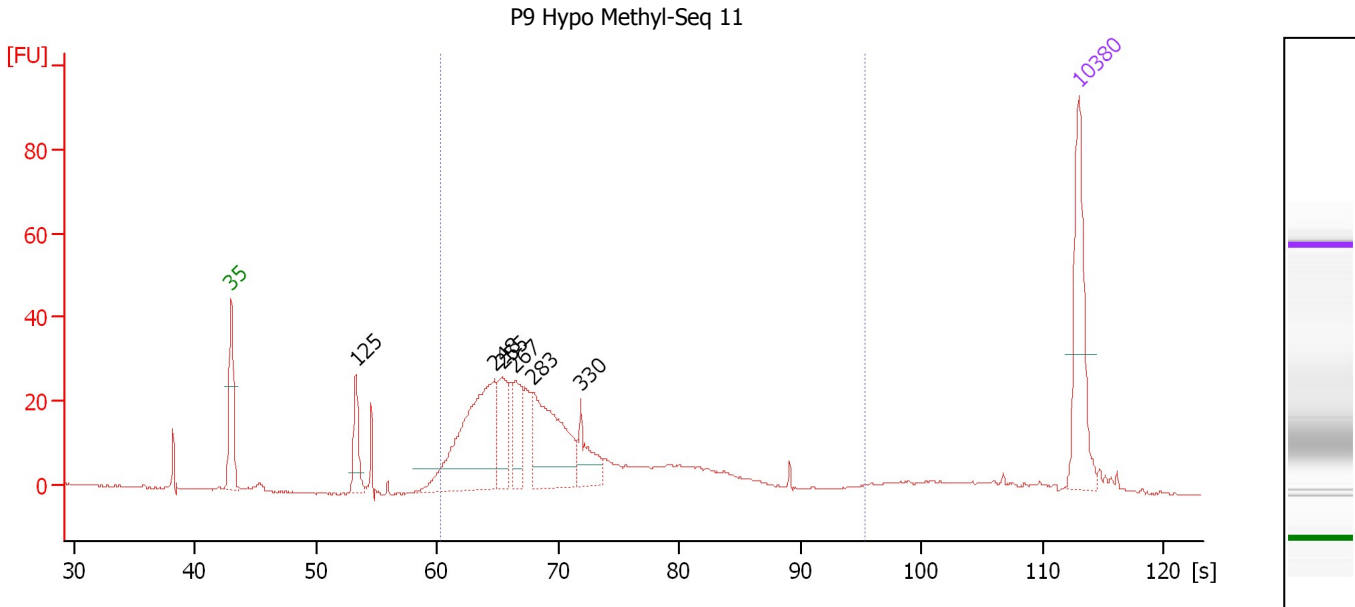
**Region table for sample 9 : P9 Hypo Methyl-Seq 10**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	315	293.3	2,543.1	480.96	85	28.2

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-29\2016-09-29\_001.xad

Created: 9/29/2016 10:06:36 AM  
 Modified: 9/29/2016 10:48:27 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 10 : P9 Hypo Methyl-Seq 11**

Number of peaks found: 6                      Corr. Area 1: 456.5  
 Noise: 0.2

**Peak table for sample 10 : P9 Hypo Methyl-Seq 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	125	47.75	579.4		53.29
3	248	216.80	1,322.9		64.74
4	255	62.20	369.5		65.36
5	267	55.01	311.9		66.47
6	283	141.50	758.5		67.89
7	330	39.16	179.8		71.83
8	10,380	75.00	10.9	Upper Marker	113.00

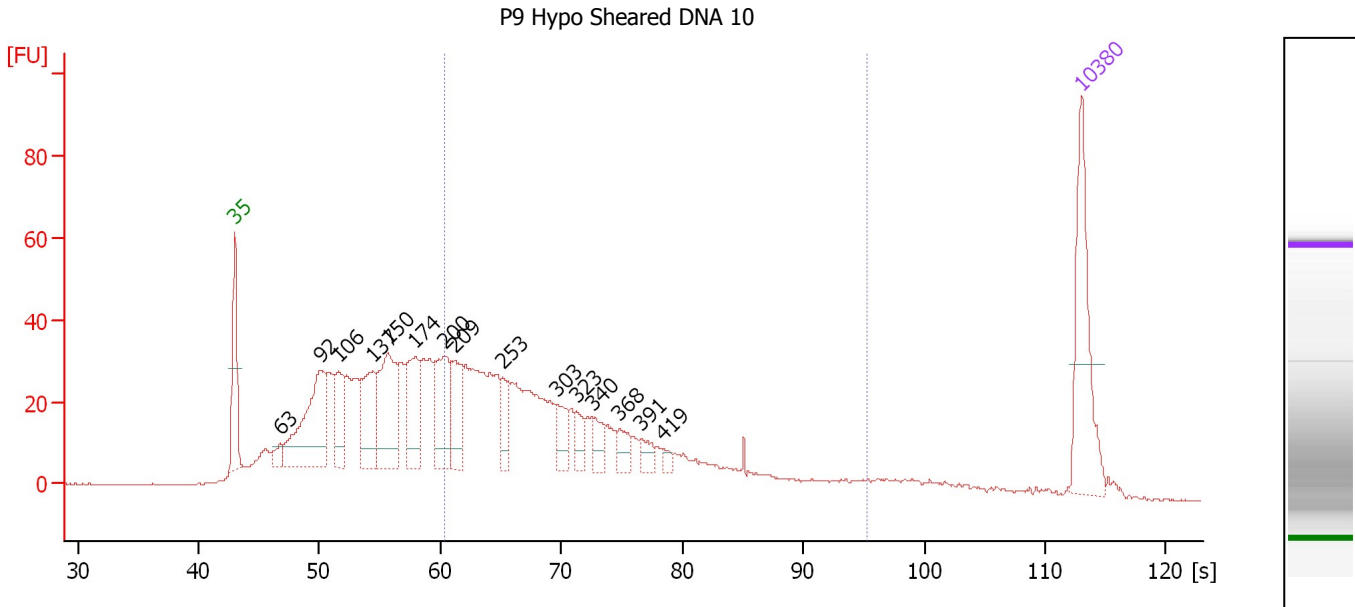
**Region table for sample 10 : P9 Hypo Methyl-Seq 11**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	320	456.5	3,598.2	683.99	84	34.6

Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-29\2016-09-29\_001.xad

Created: 9/29/2016 10:06:36 AM  
 Modified: 9/29/2016 10:48:27 AM

**Electropherogram Summary Continued ...**



**Overall Results for sample 11 : P9 Hypo Sheared DNA 10**

Number of peaks found: 15                      Corr. Area 1: 695.0  
 Noise: 0.3

**Peak table for sample 11 : P9 Hypo Sheared DNA 10**

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	63	12.58	304.4		46.77
3	92	150.70	2,474.3		50.10
4	106	50.57	720.0		51.57
5	137	75.43	832.4		54.45
6	150	114.60	1,156.5		55.65
7	174	72.62	631.0		57.91
8	200	72.51	549.2		60.31
9	209	53.72	389.9		61.11
10	253	25.89	155.2		65.15
11	303	25.73	128.8		69.68
12	323	17.68	83.0		71.28
13	340	19.36	86.3		72.61
14	368	16.16	66.6		74.83
15	391	11.53	44.7		76.65
16	419	6.09	22.0		78.47
17	10,380	75.00	10.9	Upper Marker	113.00

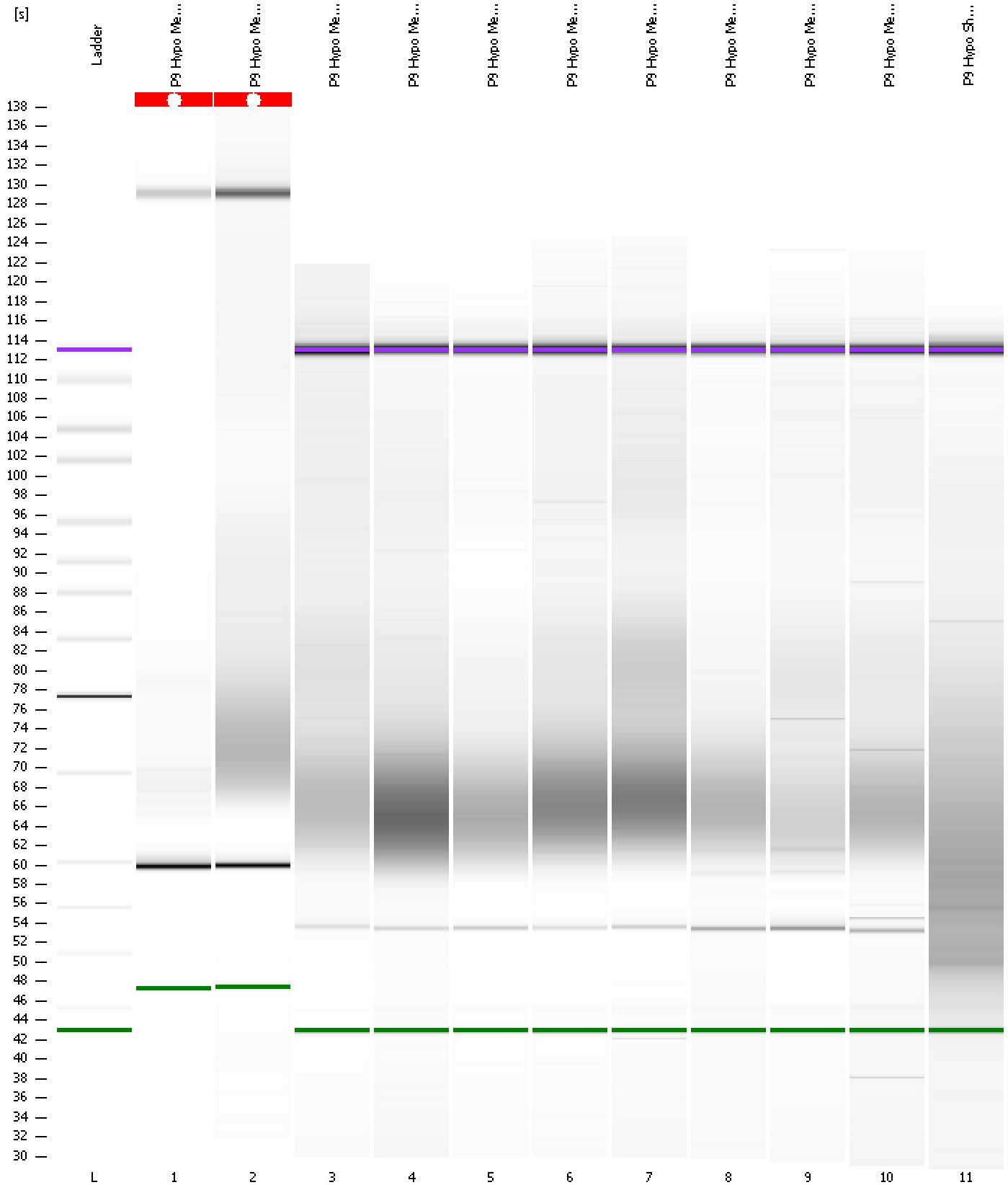
**Region table for sample 11 : P9 Hypo Sheared DNA 10**

From [bp]	To [bp]	Average Size [bp]	Corr. Area	Molarity [pmol/l]	Co Conc. [pg/μl]	% of Total	Size distribution in CV [%]
200	1,000	338	695.0	4,175.3	799.91	47	40.8

Assay Class: High Sensitivity DNA Assay  
Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-29\2016-09-29\_001.xad

Created: 9/29/2016 10:06:36 AM  
Modified: 9/29/2016 10:48:27 AM

**Gel Image**





Assay Class: High Sensitivity DNA Assay  
 Data Path: C:\... bioanalyzer\2100 expert\data\2016-09-29\2016-09-29\_001.xad

Created: 9/29/2016 10:06:36 AM  
 Modified: 9/29/2016 10:48:27 AM

**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		9/29/2016 10:48:24 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Run started on port 1 (File: C:\Program Files\Agilent\2100 bioanalyzer\2100 expert\data\2016-09-29\2016-09-29_001.xad)		Instrument	Run		9/29/2016 10:06:42 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Product Number : G2938B		Instrument	Run		9/29/2016 10:06:42 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Name :		Instrument	Run		9/29/2016 10:06:42 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Vendor : Agilent Technologies		Instrument	Run		9/29/2016 10:06:42 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Serial# : DE13701086		Instrument	Run		9/29/2016 10:06:42 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Firmware : C.01.069		Instrument	Run		9/29/2016 10:06:42 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1
Cartridge : Electrode		Instrument	Run		9/29/2016 10:06:42 AM	(GMT --07:00) Pacific Standard Time	UC Davis	D8XSMGH1