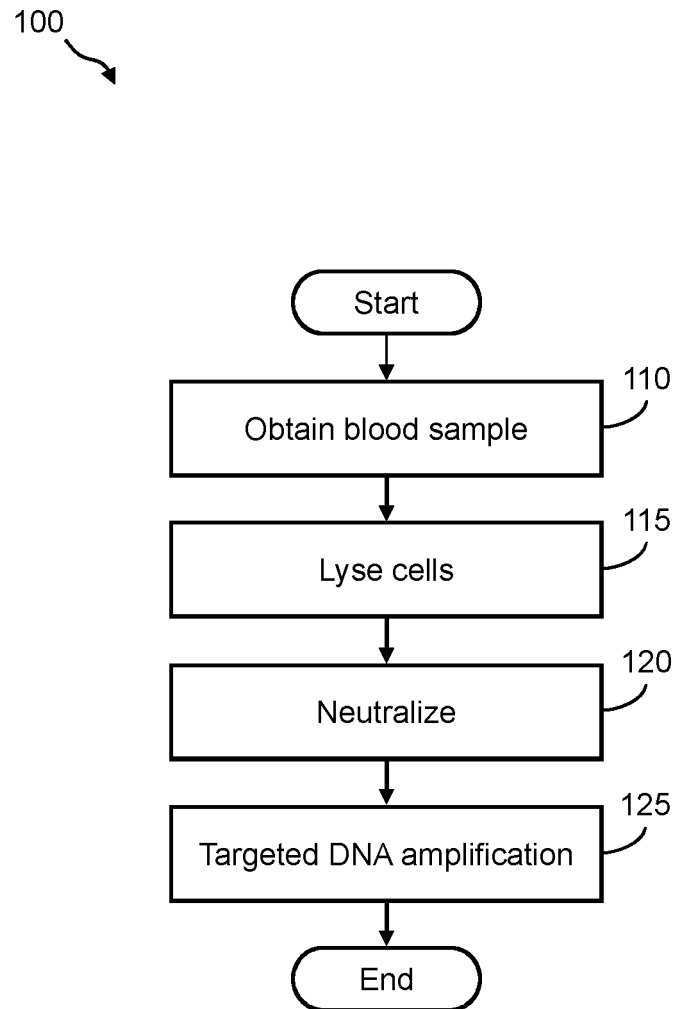


**Figure 1**

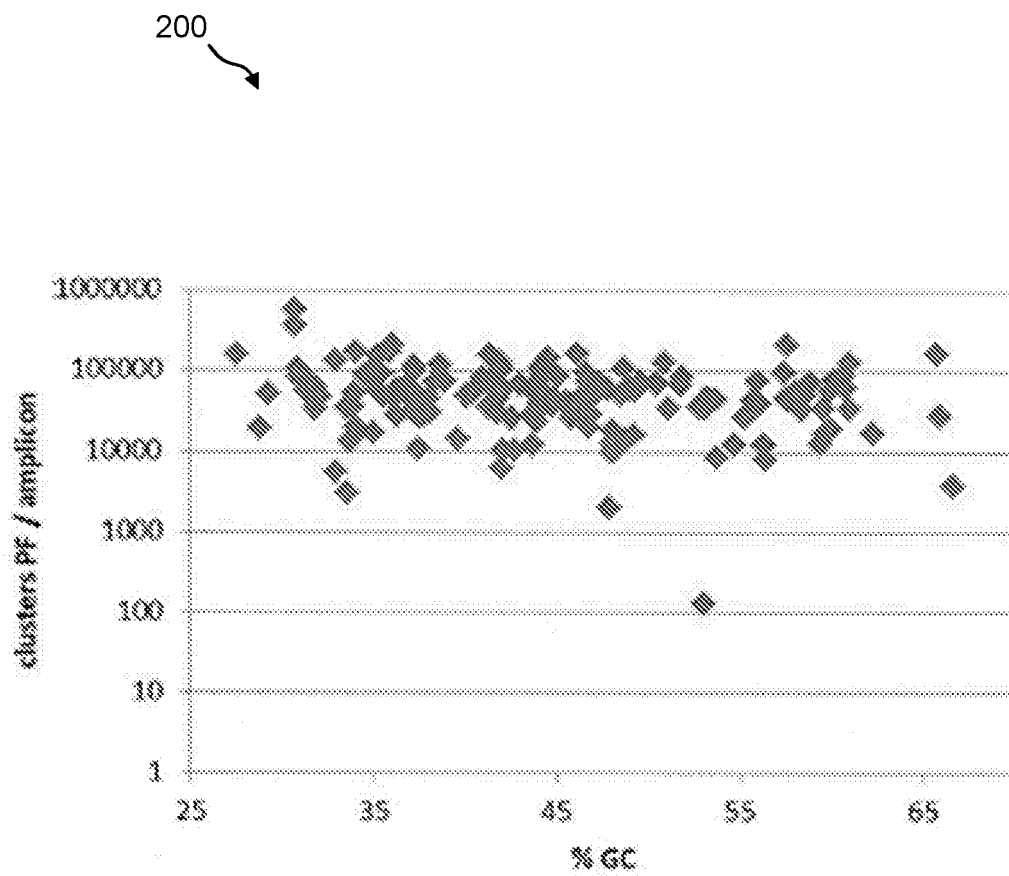


Figure 2

300

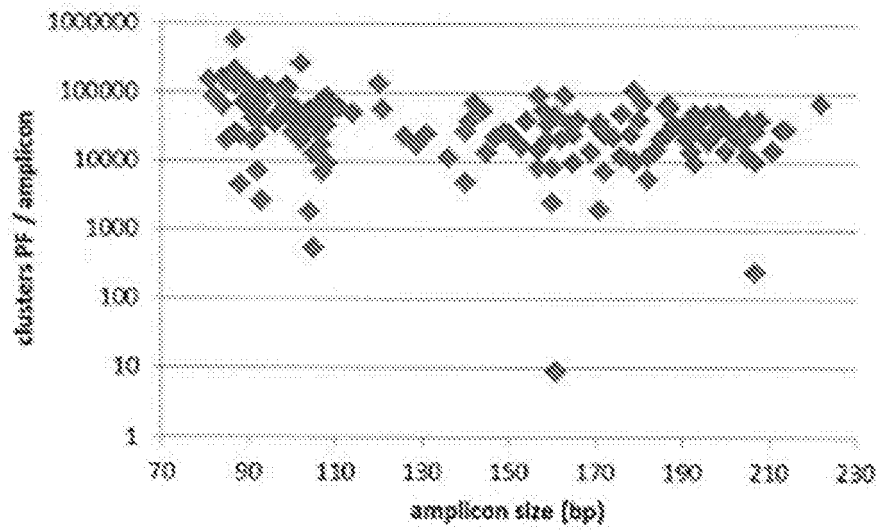


Figure 3A

350

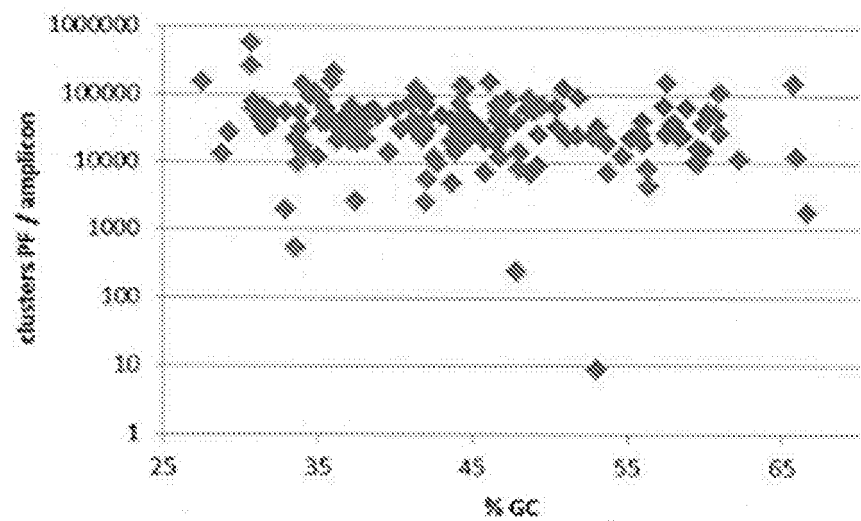


Figure 3B

400

TABLE 1

Time	Time	Density 25-2000000	Cluster PF 100	Phosphorus (%)	Ratio 100	Ratio of 100	% w/o 100	Cycles Completed	Aligned (%)	Error Rate (%)	Error Rate 25 cycles (%)	Error Rate 50 cycles (%)	Error Rate 100 cycles (%)	Error Rate 200 cycles (%)	% intensity cycles 20
1	100	1000000	100	100	100	100	100	100	100	100	100	100	100	100	100

Figure 4

500 

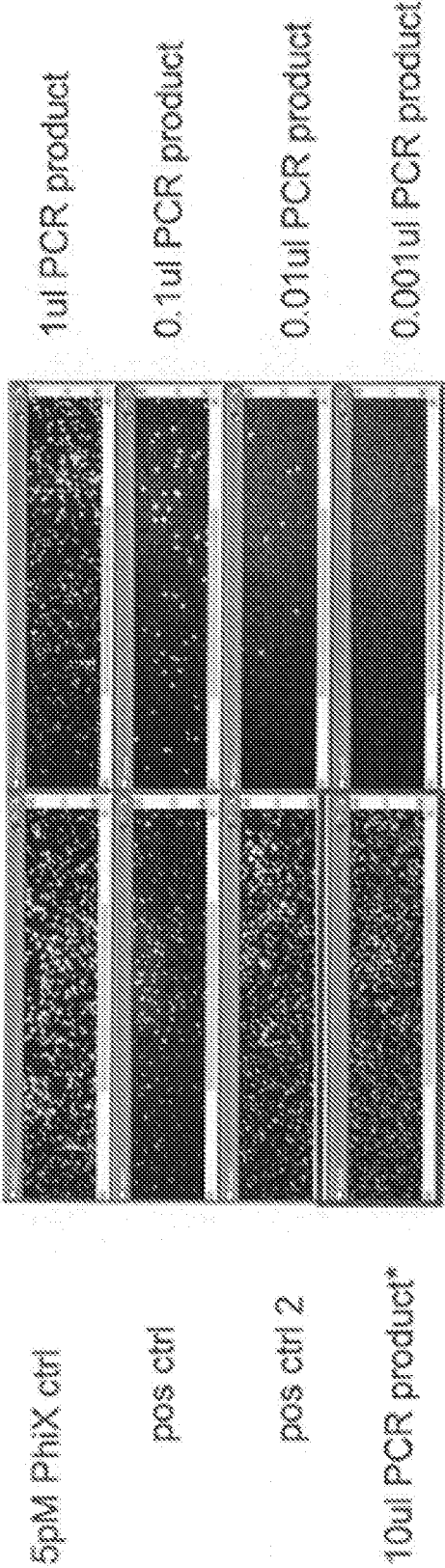
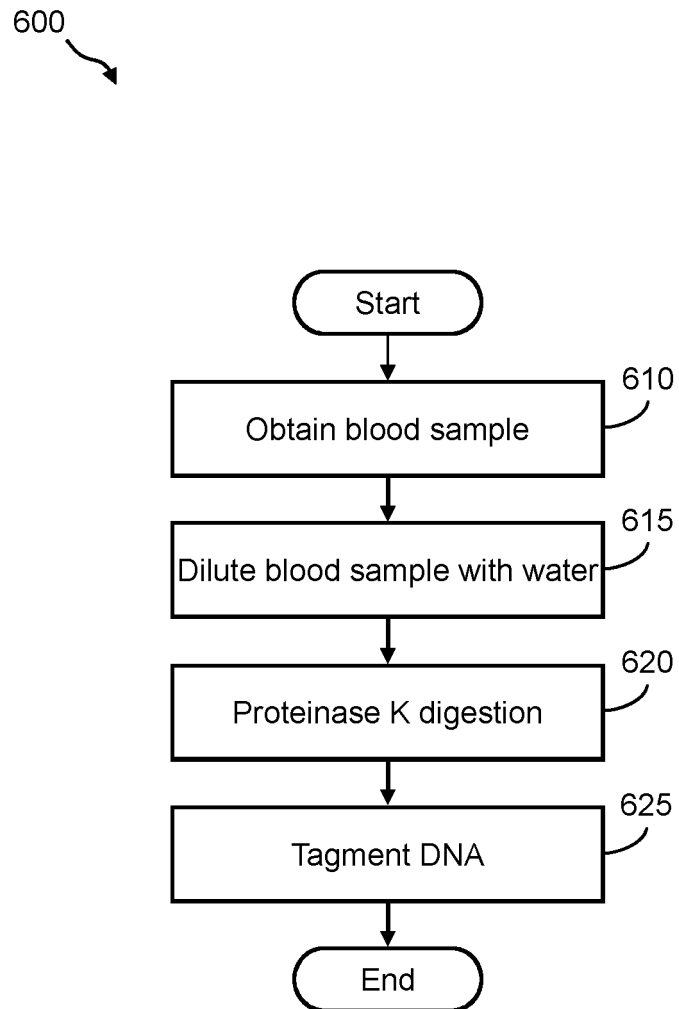
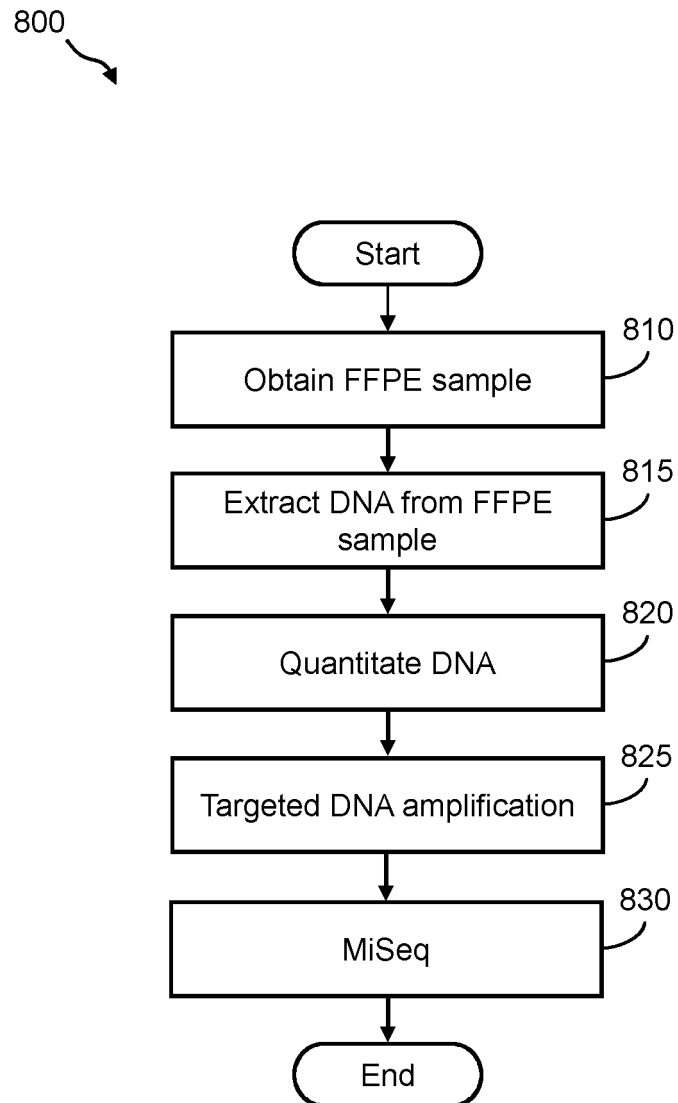


Figure 5

**Figure 6**

**Figure 8**

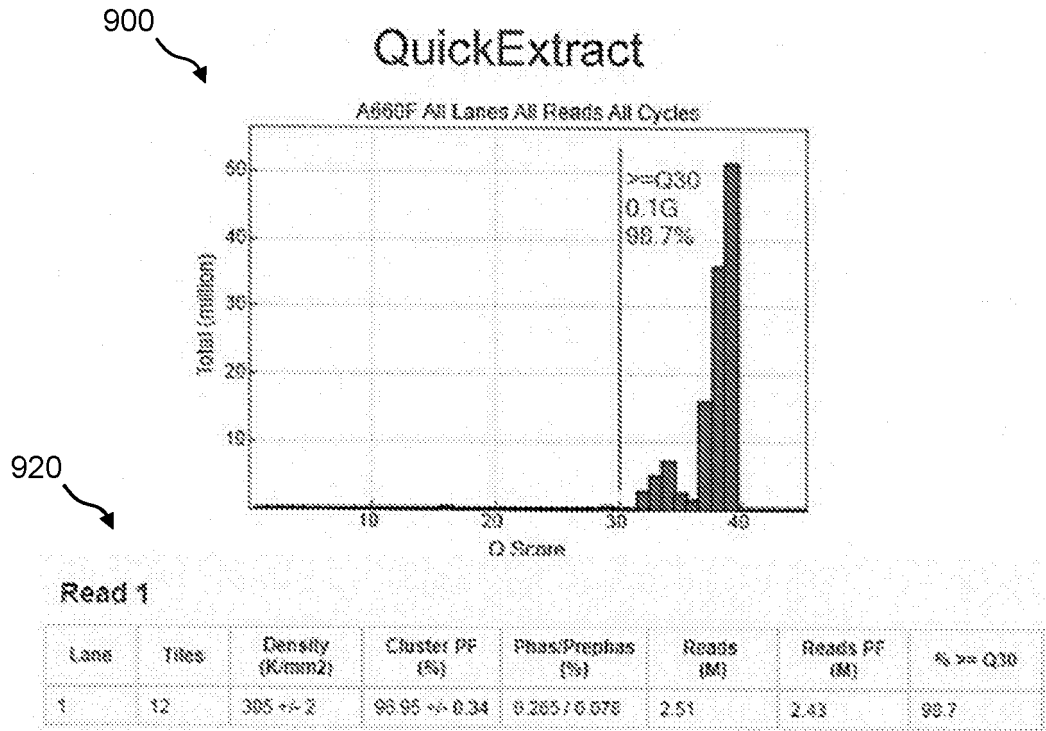


Figure 9A

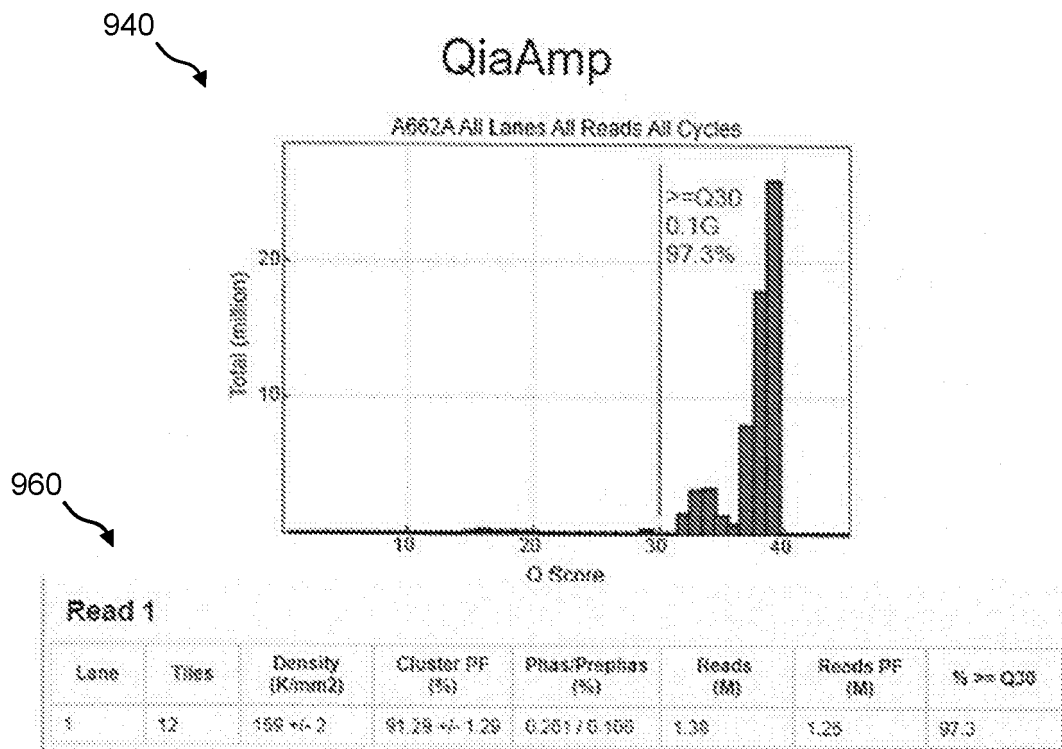
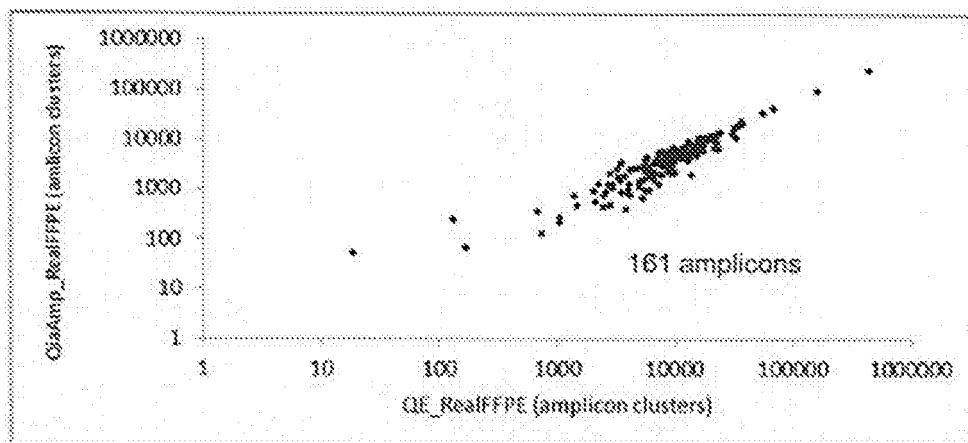


Figure 9B

1000
↘

Metric	QiaAmp	QuickExtract
Predilution required	1/10	1/2
Density (K/mm2)	159	305
Clusters PF	1.26M	2.43M
Clusters PF (%)	91.3	97.0
% $\geq$ Q30	97.3	98.7
Align to human (%)	96.6	97.9
on target (%)	97.6	97.8
Amplicon uniformity 0.2 (%)	80.1	88.2

Figure 10A1050
↘**Figure 10B**

1100

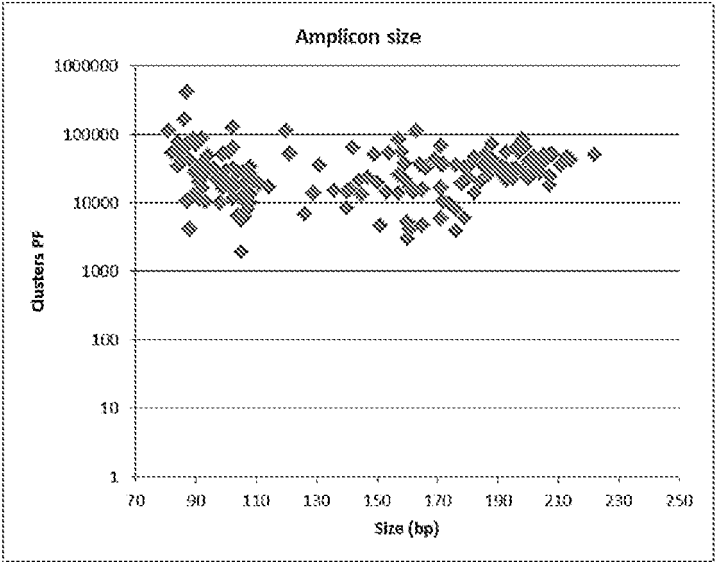


Figure 11A

1150

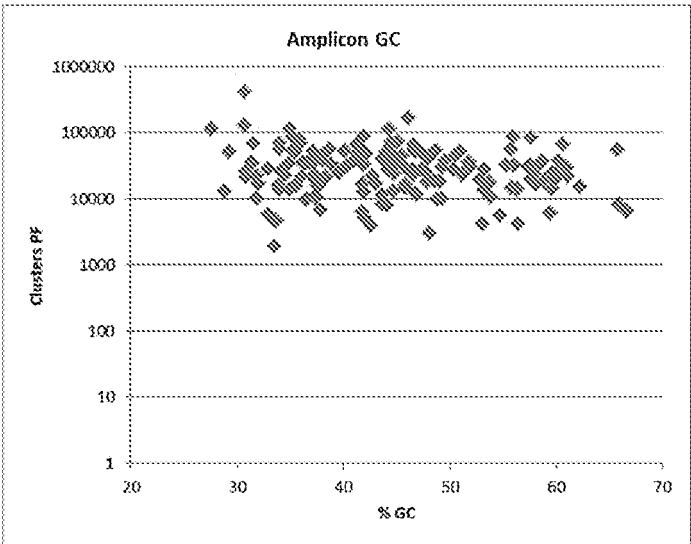


Figure 11B

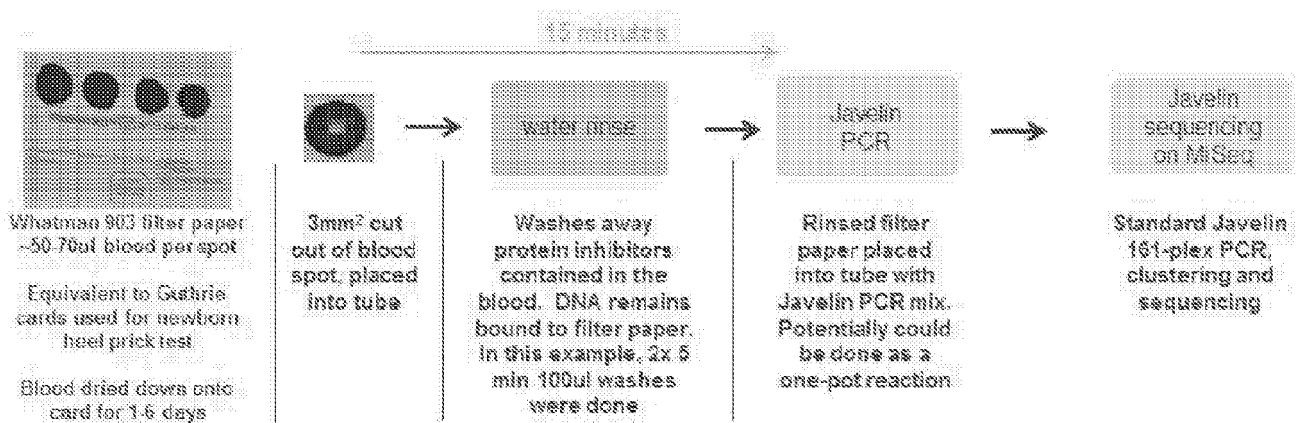
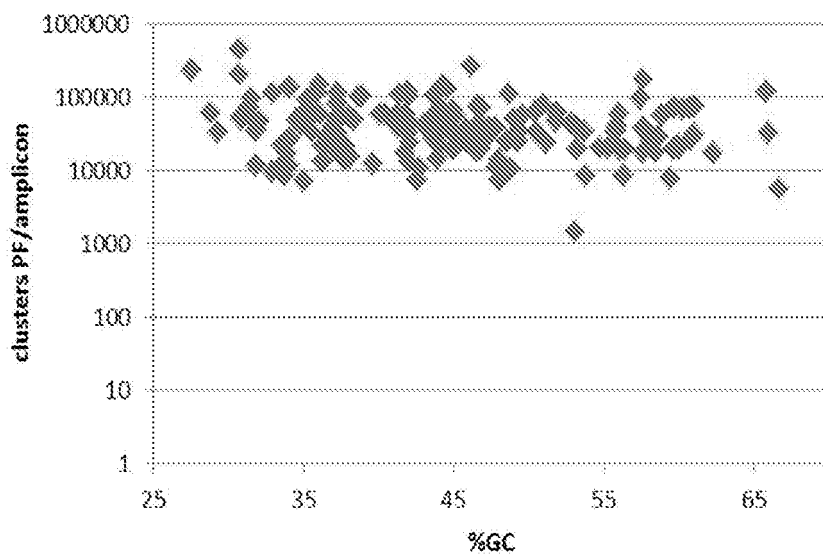


Figure 12

Density	1281 K/mm2
Passing Filters	83.7%
Aligned	99.5%
> Q30	95.6%
Uniformity	94%

Figure 13A**Figure 13B**

Workflow

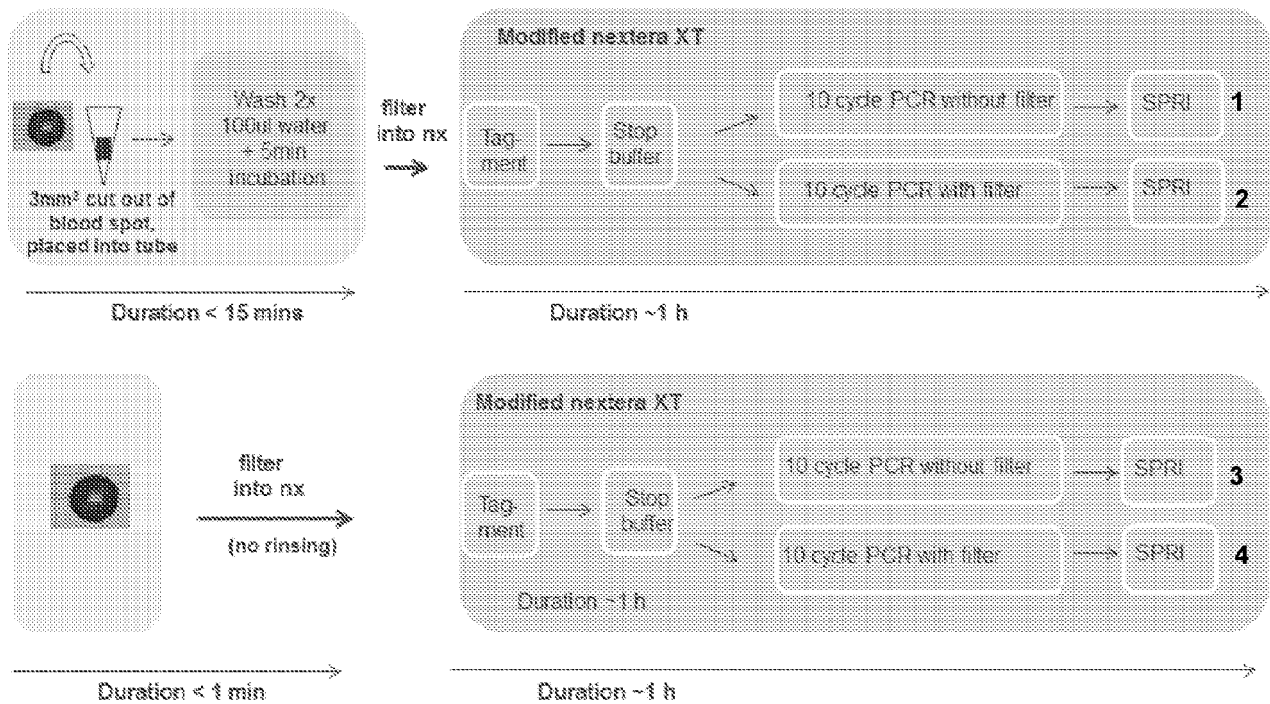


Figure 14

- 140623_HSQ1098_0350_BC48NPACXX

Workflow

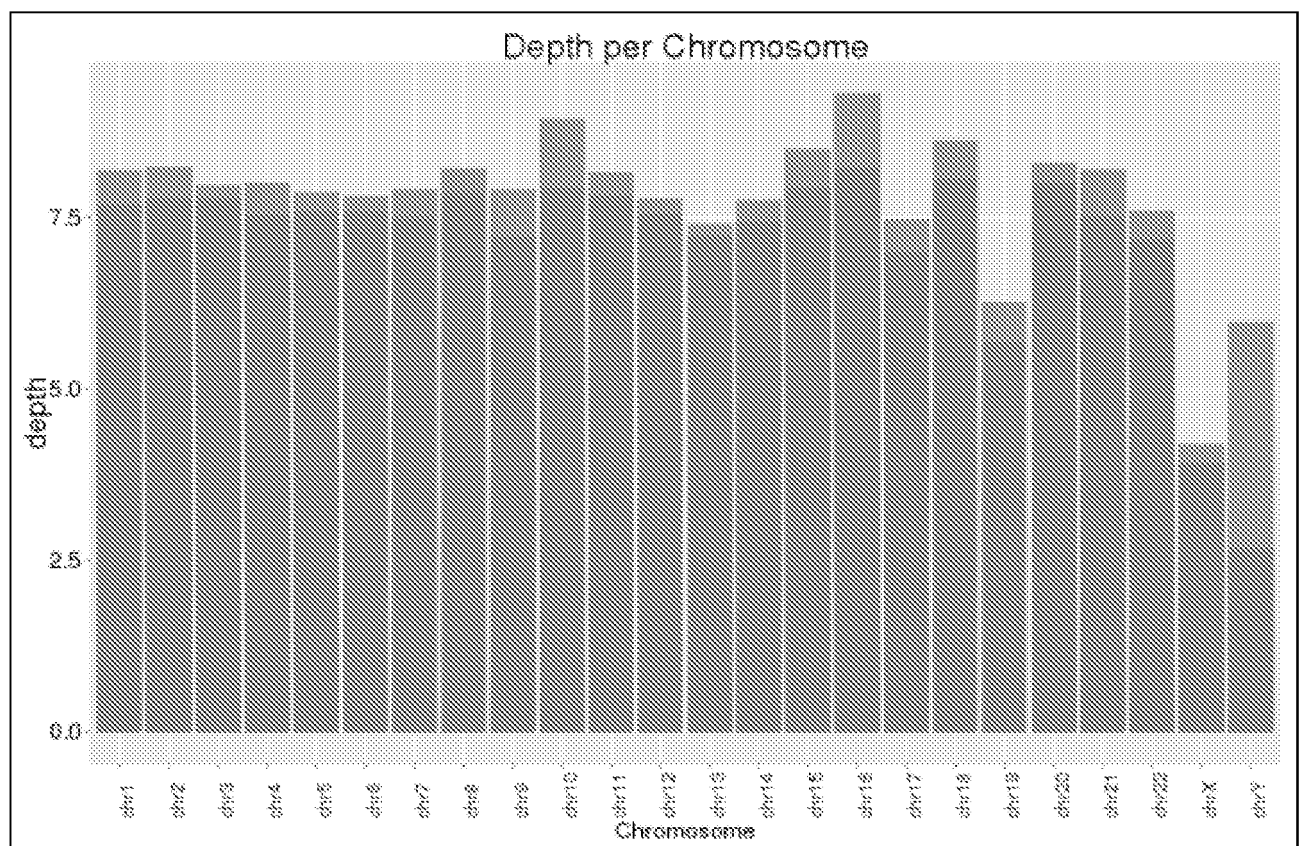
Lane Results Summary : Read 1

Lane Info		Tile Mean $\pm$ SD for Lane							
Lane	Lane Yield (kbases)	Clusters (raw)	Clusters (PF)	1st Cycle 1st (PF)	% intensity after 30 cycles (PF)	% PF Clusters	% Align (PF)	Alignment Score (PF)	% Mismatch Rate (PF)
1	17823728	955528 $\pm$ 47915	919128 $\pm$ 57008	1193.8 $\pm$ 132.5	87.2 $\pm$ 1.8	96.15 $\pm$ 2.17	96.36 $\pm$ 0.05	55.14 $\pm$ 0.03	0.38 $\pm$ 0.01
2	27021992	1491999 $\pm$ 69050	1393461 $\pm$ 121213	1172.0 $\pm$ 136.3	87.1 $\pm$ 2.5	93.24 $\pm$ 4.70	96.33 $\pm$ 0.05	55.10 $\pm$ 0.04	0.39 $\pm$ 0.02
3	17095611	915359 $\pm$ 64734	881581 $\pm$ 71192	1170.9 $\pm$ 131.7	87.9 $\pm$ 1.7	96.26 $\pm$ 2.24	96.25 $\pm$ 0.06	54.86 $\pm$ 0.04	0.39 $\pm$ 0.02
4	26648568	1464366 $\pm$ 69243	1374204 $\pm$ 97940	1139.6 $\pm$ 127.5	86.6 $\pm$ 1.8	93.75 $\pm$ 3.69	96.24 $\pm$ 0.06	54.83 $\pm$ 0.05	0.40 $\pm$ 0.05
5	21768040	1173696 $\pm$ 48258	1122527 $\pm$ 64279	1243.3 $\pm$ 119.9	85.6 $\pm$ 1.2	95.64 $\pm$ 2.32	96.12 $\pm$ 0.06	54.89 $\pm$ 0.03	0.39 $\pm$ 0.01
6	31813792	1758373 $\pm$ 73646	1640563 $\pm$ 112405	1216.5 $\pm$ 123.0	85.3 $\pm$ 1.5	93.21 $\pm$ 3.23	96.08 $\pm$ 0.05	54.83 $\pm$ 0.04	0.40 $\pm$ 0.02
7	19114184	1020064 $\pm$ 63210	985674 $\pm$ 64585	1186.4 $\pm$ 112.4	86.1 $\pm$ 1.9	96.61 $\pm$ 1.24	96.16 $\pm$ 0.05	54.82 $\pm$ 0.04	0.40 $\pm$ 0.01
8	28152037	1580124 $\pm$ 102089	1451735 $\pm$ 204056	1157.6 $\pm$ 134.8	87.1 $\pm$ 4.8	91.39 $\pm$ 8.71	96.14 $\pm$ 0.05	54.83 $\pm$ 0.08	0.41 $\pm$ 0.02

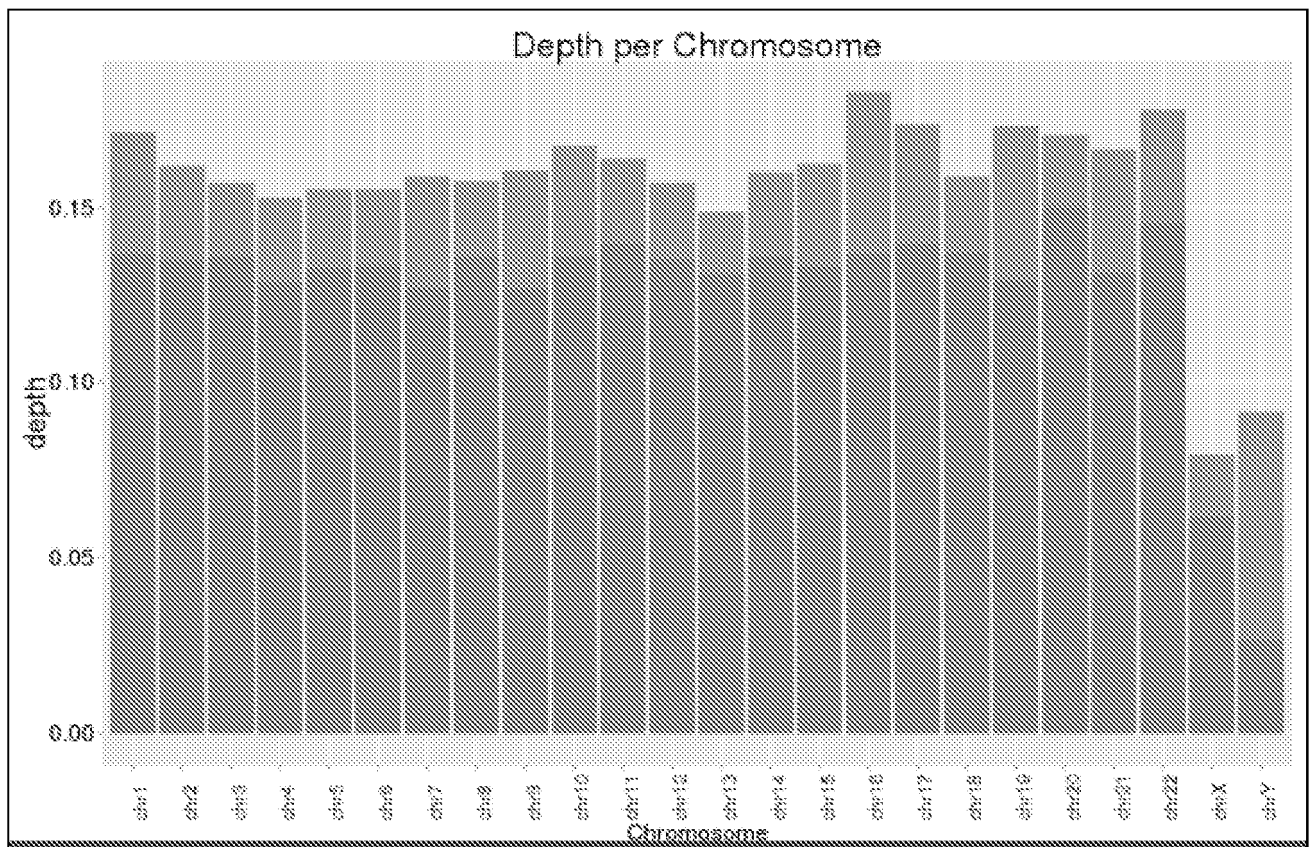
Nextera tagmentation based whole genome sequencing directly from blood spots on HiSeq

Figure 15

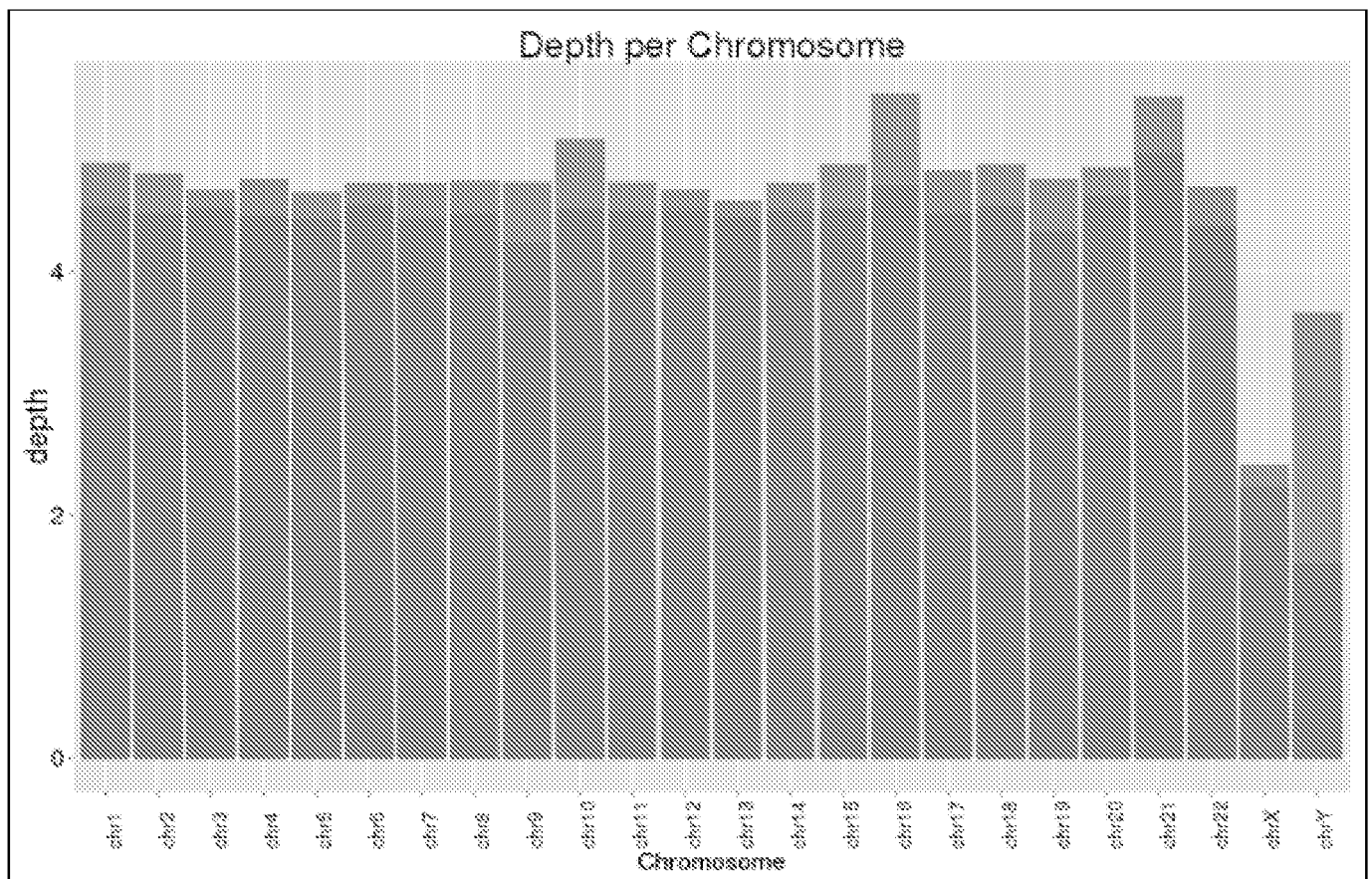
Diversity	Depth	GC d.o.	AT d.o
4.11 billion	4.8 x	0.31	3.23

**Figure 16**

Diversity	Depth	GC d.o.	AT d.o
2.25 billion	0.16 x	0.03	7.85

**Figure 17**

Diversity	Depth	GC d.o.	AT d.o
0.85 billion	7.5 x	0.71	7.05

**Figure 18**

	gDNA controls			EDTA Blood			Blood Spots	
Prep	Truseq (gDNA)	Nextera (gDNA)	2ul Blood Nextera	Blood BBN 1 Pre- Assembled, SPRI	Blood BBN 2 On-bead, Zymo	Blood BBN 3 On-bead, SPRI	Direct blood spot	Indirect blood spot
read length	2x100	2x100	2x100	2x100	2x100	2x100	2x100	2x100
mean raw density (K/mm ²)	817	821	854	925	961	724	808	980
mean %PF	88.1	95.0	95.3	94.3	92.5	95.1	88.0	93.4
mean %align (PF)	90.0	96.1	95.6	96.7	95.1	97.3	95.3	95.7
mean %>Q30	95.2	95.8	96.2	95.5	90.4	91.5	86.5	94.9
Coverage before downsampling	35.7	35.6	34.1	38.4	36.8	31.9	36.0	32.7
Downsampled coverage	29.9	30.0	30.1	30.2	30.1	29.8	30.8	30.2

Figure 19

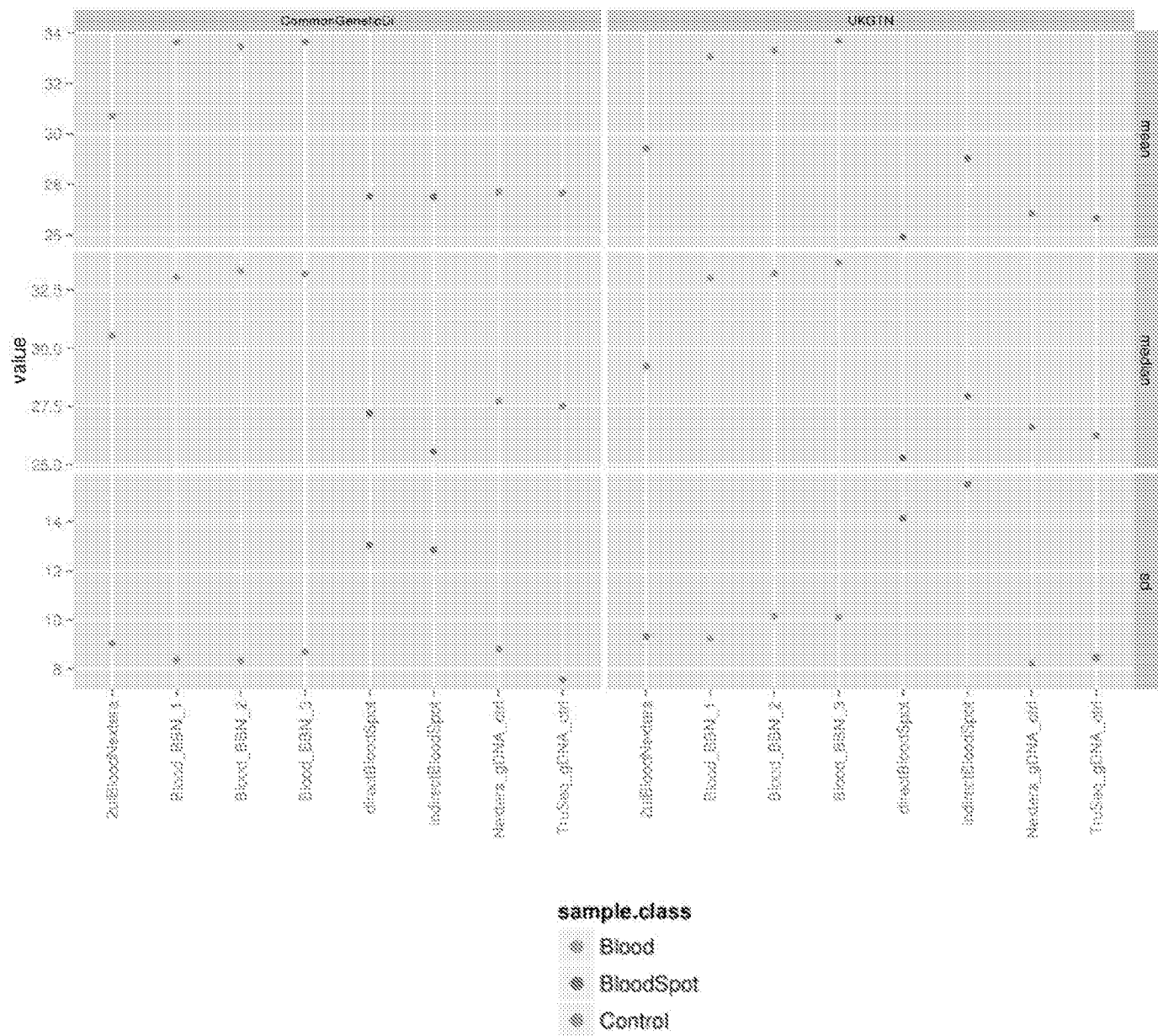
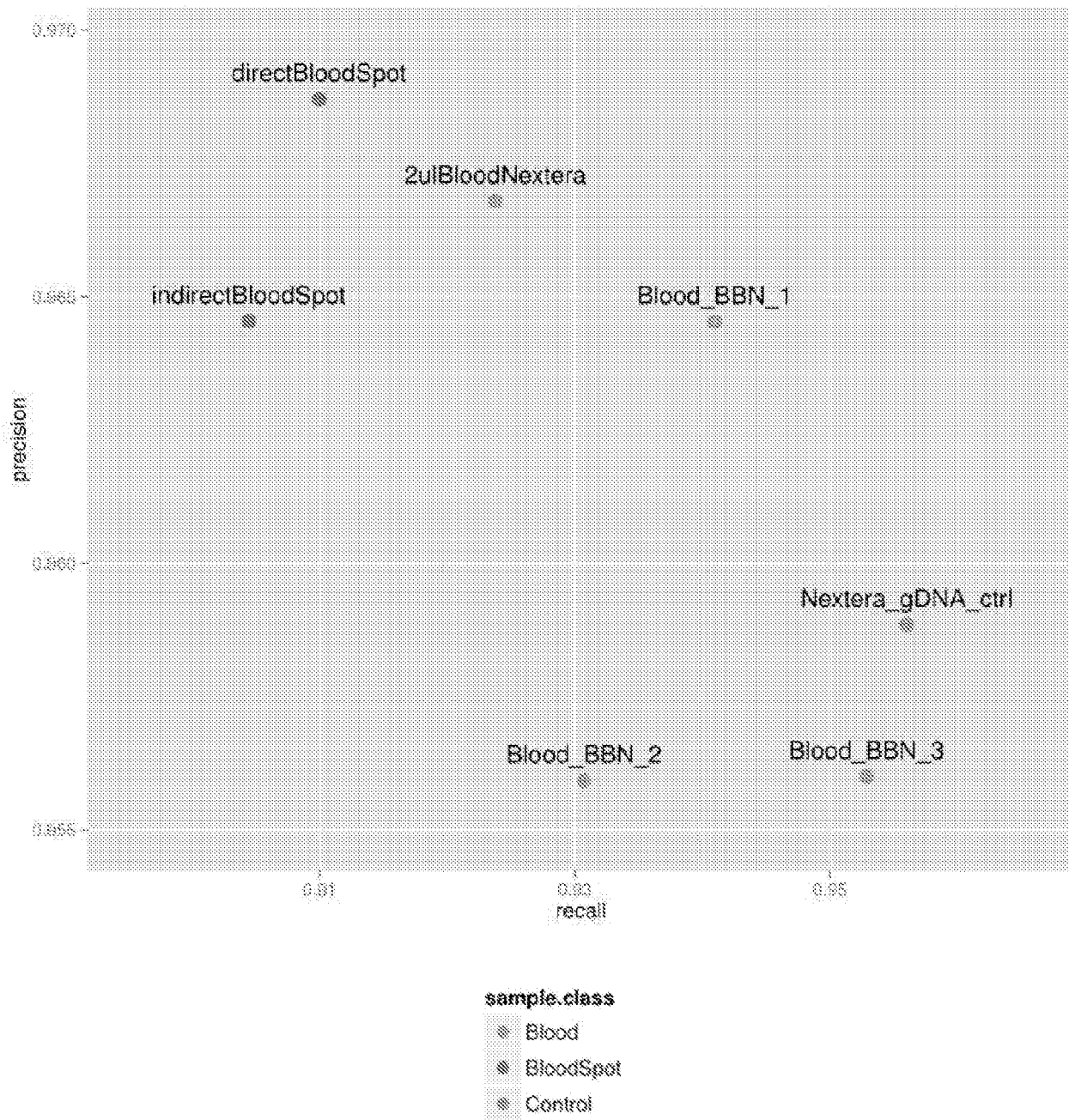
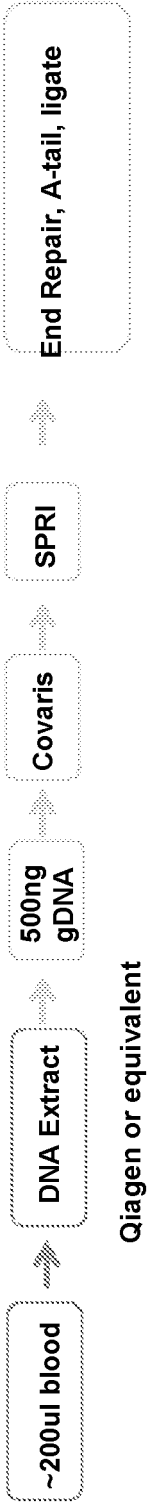


Figure 20

**Figure 21**

Standard TruSeq Nano preparation



Direct from blood modifications to TruSeq Nano workflow

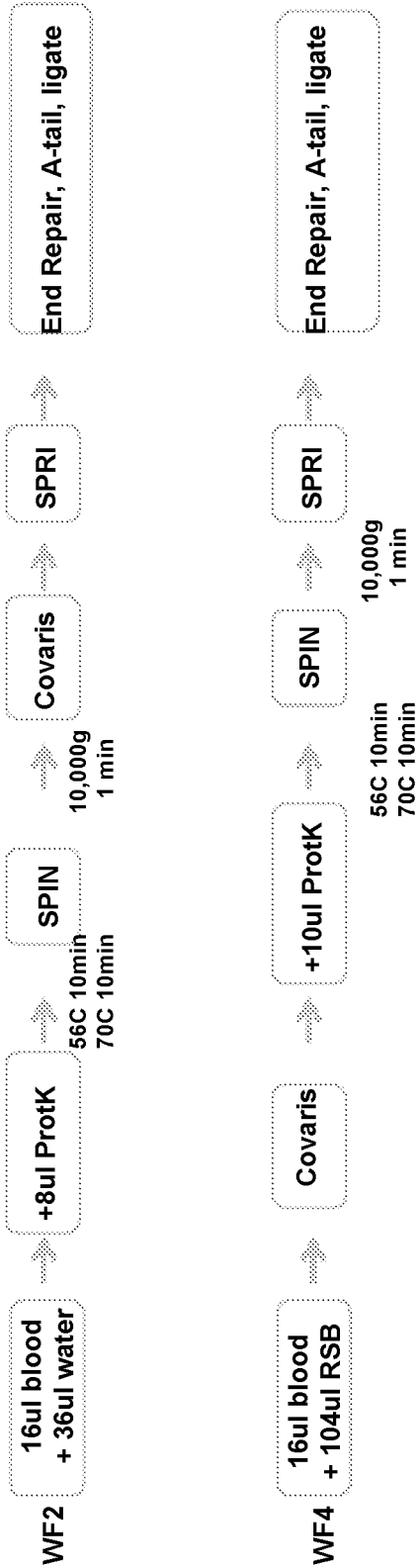


Figure 22

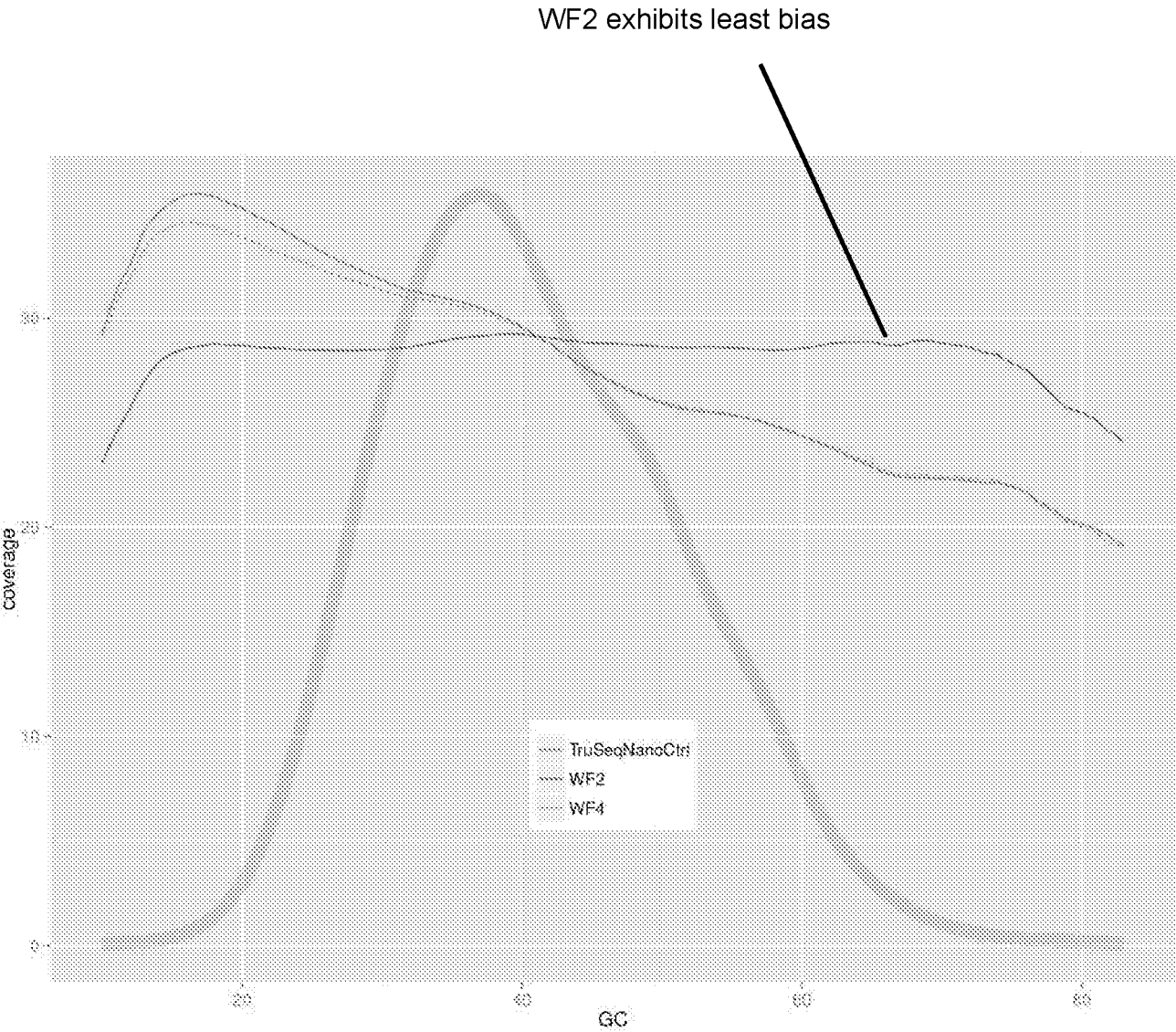


Figure 23

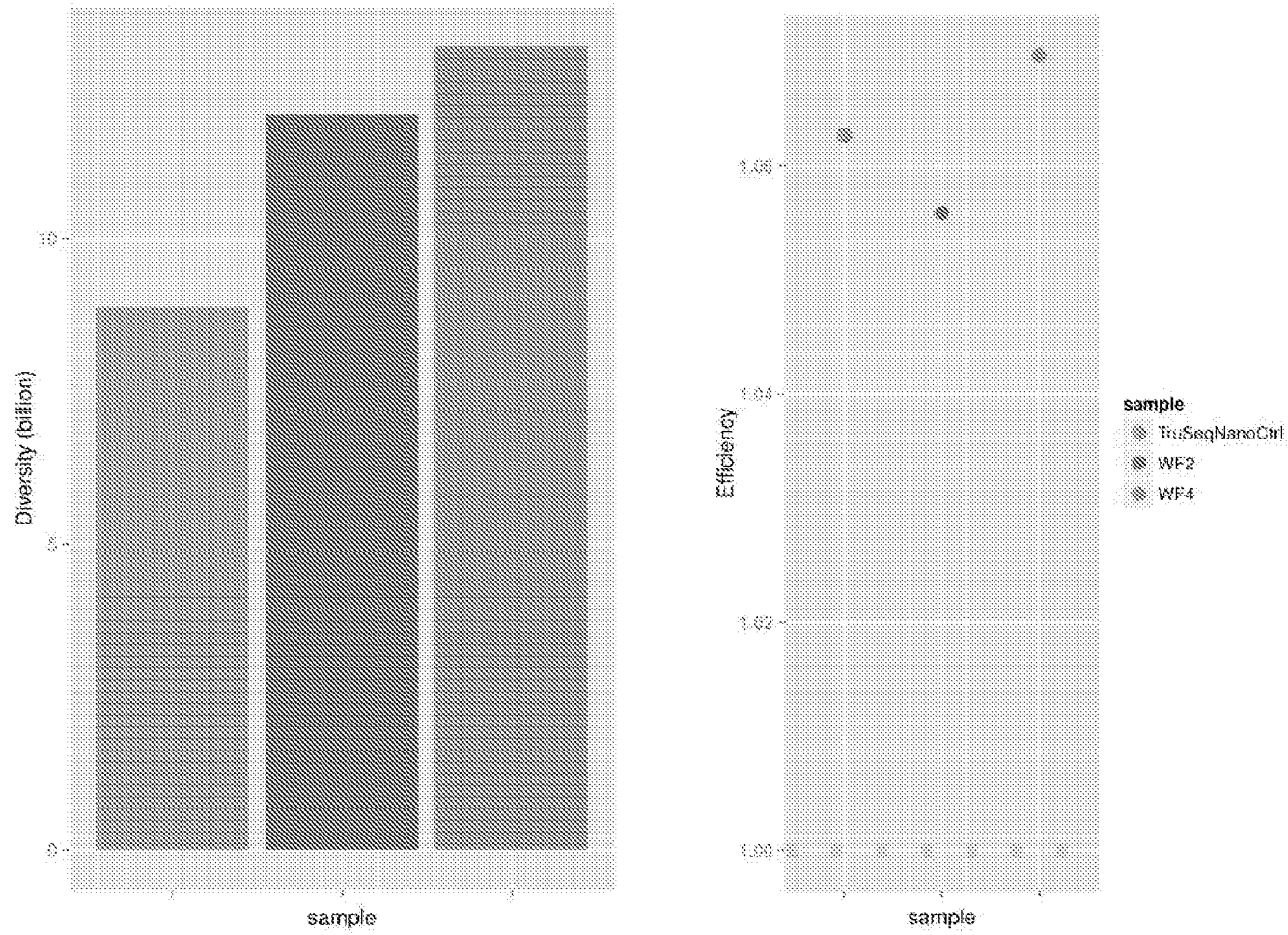


Figure 24

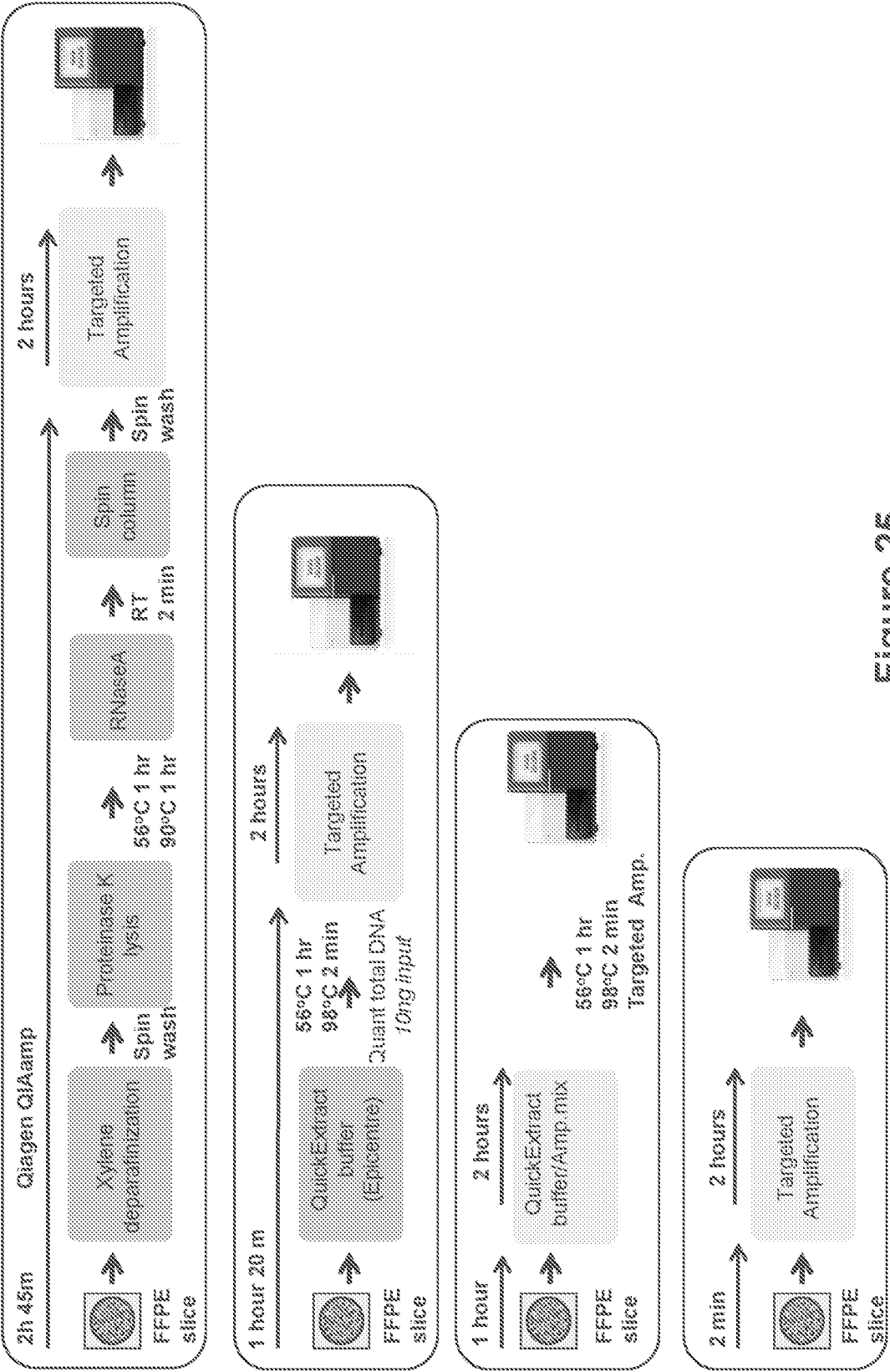


Figure 25

Coverage Uniformity	Horizon cell line	Colon tumour 1	Colon tumour 2
Qiagen purification (2h 45min)	94%	80%	69%
1h 20min workflow	88%	88%	60%
1h 2min workflow	96%	-	62%
2 min workflow	91%	-	65%

Figure 26

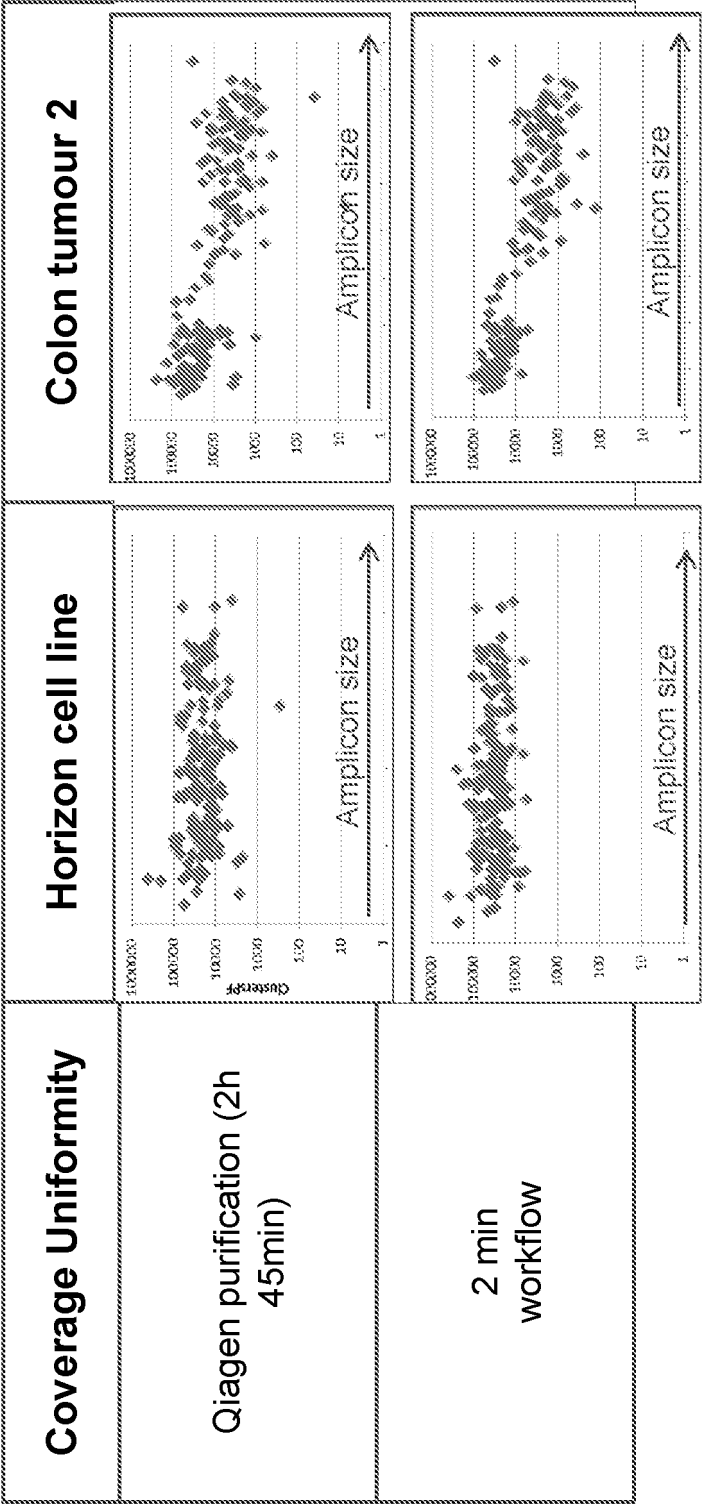


Figure 27