

Genomic DNA Extraction

Objective

To extract human genomic DNA from buffy coat for SNP genotyping.

Starting Materials

Buffy coat samples: 500 frozen buffy coat samples, 1ml each, were attained from customer.

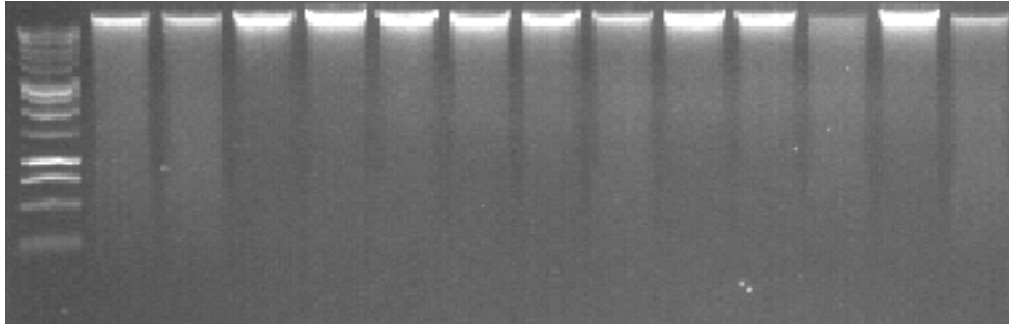
Methods

1. DNA extraction: DNA extraction protocol was followed FlexiGene DNA Kit (Qiagen, CA) manual. Final resuspension volume is 400 μ l. After extraction, 13 DNA samples (3 μ l) were run on 0.7% agarose gel to check the DNA quality.
2. DNA quantification: All DNA samples were quantitated by NanoDrop.
3. DNA aliquoting: According to customer's specification, 5 μ g of each DNA samples was transferred to customized 96-well plates.

Results

QC gel:

M 1 2 3 4 5 6 7 8 9 10 11 12 13



NanoDrop results (Partial):

Sample	Nanodrop Conc (ng/ul)	260/280 ratio
1	184.37	1.86
2	65.08	1.81
3	141.59	1.82
4	155.09	1.86
5	113.97	1.3
6	105.45	1.8
7	114.85	1.87
8	64.45	1.87
9	157.94	1.82
10	132.76	1.85
11	50.07	2.14

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12	116.41	1.79
13	31.46	1.52
14	85.67	1.85
15	103.63	1.81
16	89.34	1.62
17	96.17	1.81
18	103.58	1.81
19	140.03	1.9
20	131.87	1.81

DNA aliquoting:

According to customer's specification, 5µg of each DNA samples was transferred to customized 96-well plates. All wells were made up to 150µl with dH₂O.

Conclusion

The QC gel clearly shows that all genomic DNA samples extracted are high molecular weight. The NanoDrop result shows that about 20-50µg of DNA were isolated from 1ml buffy coat samples. The DNA extraction and aliquoting are successful.