

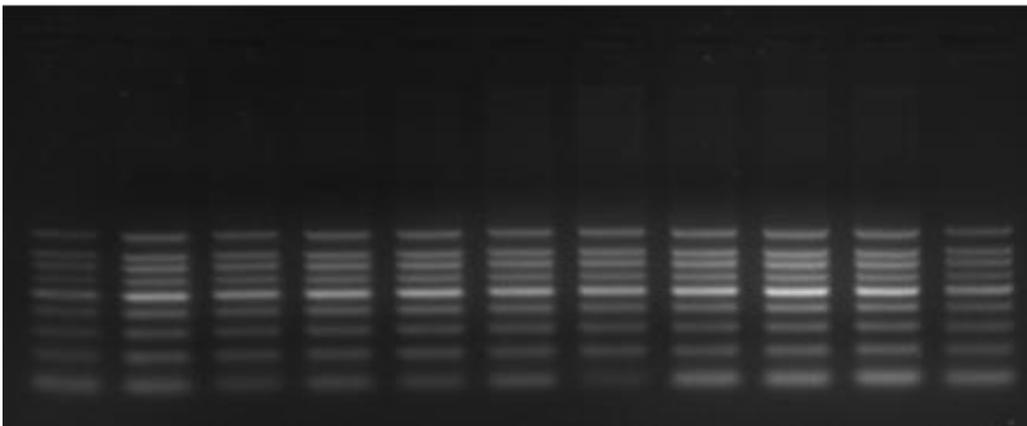
Experiment of Urine DNA extraction by D3182 HiPure Circulating DNA Kit

- Sample type: Urine with quantitative addition of 50bp DNA marker [Sample preparation method: Take 5ml/10ml/20ml urine, add 20ul 50bp DNA marker, and then extract according to Kit]
- Sample amount: 5ml/10ml/20ml
- Elution volume: 50ul
- Experiment kit: D3182
- Detecting method: nanodrop, electrophoresis, qubit
- Experiment data:

Electrophoregram:

Urine DNA extraction experiment

Control 60% | 5ml | Protocol A 10ml | 20ml | Protocol B 10ml | Control 80%



Nanodrop data:

System	DNA (ng/ul)	Yield (ug)	A260/A280	A260/A230
5ml urine	43.00	2.00	1.85	0.44
	45.71	2.29	1.83	0.57
10ml urine	45.73	2.29	1.84	0.45
	45.00	2.25	1.82	0.46
20ml urine	64.27	3.21	1.75	0.52
	62.44	2.87	1.79	0.35
10ml urine (Protocol B)	53.83	2.69	1.82	0.55
	52.80	2.39	1.81	0.48
	55.69	2.78	1.82	0.35

Qubit data:

System	qubit	Yield	Recover rate	speed through the column
5ml urine	32.8	1640	95%	14min
	32.0	1600	92%	
10ml urine	29.2	1460	84%	33min
	31.2	1560	90%	
20ml urine	35.4	1770	102%	15ml 53min 5ml 3000 xg centrifuge 3min
	36.0	1800	104%	
10ml urine (Protocol B)	32.8	1640	95%	25min
	32.4	1620	94%	
	30.8	1540	89%	
Reference	34.6	1730	100%	

Conclusion:

In this experiment, a large amount of 50bp DNA Marker (~3ug) was added to urine to simulate and verify the DNA recovery rate, short fragment recovery rate, and nucleic acid purity of the kit. The purified DNA was analyzed using electrophoresis and Nanodrop, qubit, and the results were as follows:

- 1: 50bp DNA fragments can be recovered, according to electrophoresis, the recovery rate can reach 80%.
- 2: The overall DNA recovery rate can exceed 80%