Product Application

gDNA Extraction from lactic acid bacterium (*P. pentosaceus*) in Kimchi juice

Kit : Maxwell® RSC Blood DNA Kit (Catalog # AS1400), Maxwell® RSC PureFood GMO and Authentication Kit (Catalog # AS1600)

Analyses : NanoDrop、Conventional PCR

Sample Type(s) : Kimuchi juice

Input : 150~300µl

Protocol :

	Blood DNA Kit		PureFood GMO and Authentication Kit		
Kimchi juice (µl)	150	300	150		300
CTAB (µl)	-	-	150		300
Proteinase K (µl)	-	-	10		20
RNase (µl)	-	-	5		10
Lysis Buffer (µl)	150	300	-	300	-
Elution Buffer (µl)	60	60	60	60	60
Protocol	A	A	B	C	B
Concentration (ng/µl)	59.8 63.8	89.3 88.5	23.5 32.3	74.3 93.9	197.1 273.5
260/280	1.36 1.30	1.22 1.22	1.38 1.38	1.47 1.51	1.50 1.44

Table 1: Protocols and Result

Protocol A

1. Mix Kimchi juice and Lysis Buffer. Vortex.
2. Transfer to well #1 of Blood DNA Kit cartridge

Protocol B

1. Mix Kimchi juice, Lysis Buffer, CTAB, Proteinase K and RNase. Vortex.
2. Incubate at 65℃ x 30 minutes.
3. Vortex

4. Centrifuge 16,000g x 10 minutes.
5. Transfer the supernatant to well #1 of PureFood GMO and Authentication Kit cartridge.

Protocol C

1. Mix Kimchi juice, CTAB, Proteinase K and RNase. Vortex.
2. Incubate at 65℃ x 30 minutes.
3. Vortex
4. Centrifuge 16,000g x 10 minutes.
5. Transfer the supernatant to well #1 of PureFood GMO and Authentication Kit cartridge.
6. Add Lysis Buffer to well #1.

Results :

DNA concentration was measured by NanoDrop.
The results are shown in the bottom of Table 1.

The labels show the protocols and sample volumes applied to each kit. The residual Paramagnetic particles are observed in the elution tubes.

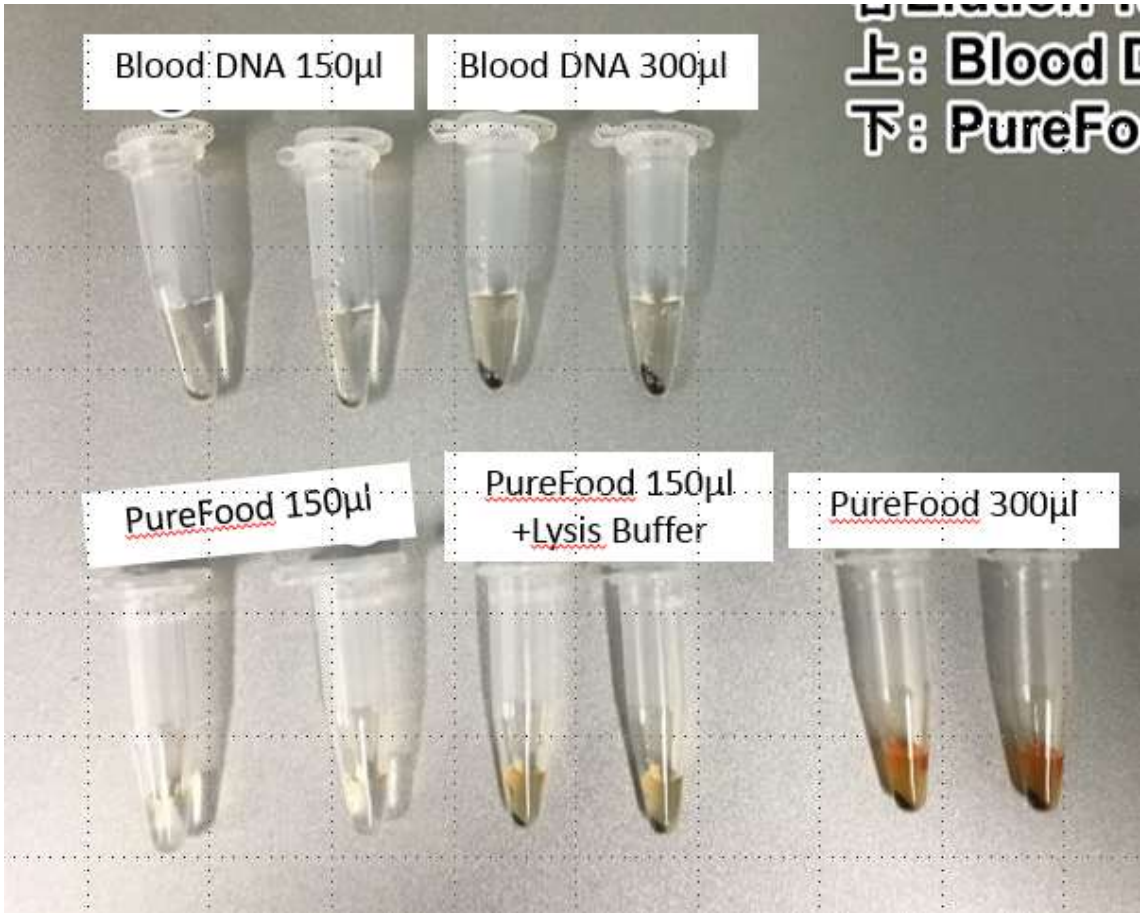

Figure 1: Sample volumes applied to each kit and the residual Paramagnetic particles

Conclusion :

Blood DNA : The amount of residual paramagnetic particles in Elution Tube co-relate to the amount of sample. When the sample volume is higher than 150µl, the residual particles tend to be observed.

PureFood : Cleanup effect of CTAB Buffer was low for this sample, and resulted in small improvement on A260/280 value. The residual paramagnetic particles and pigment was higher than Blood DNA Kit.

Although the residual paramagnetic particles were observed in Elution tube, the purified DNAs were used without problems as templates for genotyping PCR application. If the yield is not a priority, Blood DNA kit with protocol A is recommended for the purpose of purification for PCR templates because of its simple procedures.