**Evaluation Report**

**Materials:**

1) Apostle MiniMax High Efficiency cfDNA Isolation Kit (Standard Edition)
2) Competing technology P
3) Samples: standard cfDNA solution (26ng/mL, prepared from 200bp PCR products solved in 1X PBS)

**Methods:**

1) Prepare 8 samples (200 uL each) of standard cfDNA solution. Randomly divide into 2 groups.
2) Extract the cfDNA in each group using Apostle MiniMax High Efficiency cfDNA Isolation Kit (Standard Edition) and the competing technology P, respectively. Repeat 4 times in each group. Elute the product using 20 uL elution buffer.
3) Take 5 uL from each of the 20uL elution solution. Add 45 uL purified water. Take 2 uL to quantify the cfDNA in a 10 uL qPCR reaction.
4) Evaluate the extraction efficiency of the two technologies.

**Findings:**

1) Extraction efficiency evaluated by qPCR

| Sample | Ct | Ct (Mean) | Extraction Efficiency | Ct (Mean) | Extraction Efficiency (Mean) | Ct SD |
|---|---|---|---|---|---|---|
| Standard cfDNA Solution | 7.865 | 7.735 | | 7.735 | | 0.184 |
| | 7.604 | | | | | |
| Apostle-1 | 8.016 | 8.077 | 78.87% | 8.013 | 82.45% | 0.111 |
| | 8.138 | | | | | |
| Apostle-2 | 7.828 | 7.884 | 90.16% | | | |
| | 7.940 | | | | | |
| Apostle-3 | 8.040 | 7.978 | 84.48% | | | |
| | 7.916 | | | | | |
| Apostle-4 | 8.127 | 8.113 | 76.92% | | | |
| | 8.100 | | | | | |
| P-1 | 8.411 | 8.381 | 63.86% | 8.231 | 70.88% | 0.123 |
| | 8.351 | | | | | |
| P-2 | 8.142 | 8.096 | 77.84% | | | |
| | 8.050 | | | | | |
| P-3 | 8.202 | 8.173 | 73.82% | | | |
| | 8.143 | | | | | |
| P-4 | 8.220 | 8.274 | 68.80% | | | |
| | 8.328 | | | | | |

**Conclusions:**

1) All samples show normal qPCR amplification curves.
2) cfDNA extraction efficiency based on Ct values before and after the experiment: Apostle MiniMax High Efficiency cfDNA Isolation Kit (Standard Edition) shows a 12% higher efficiency than the competing technology P.