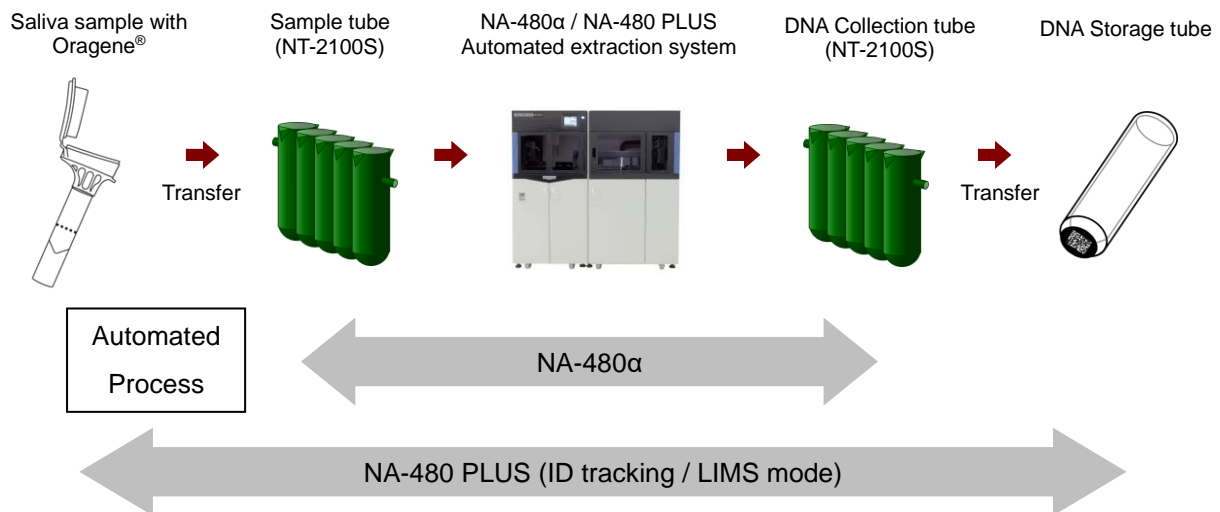


**GENE PREP STAR / SALIVA DNA Protocol**

## Automated extraction of gDNA from Oragene® saliva samples



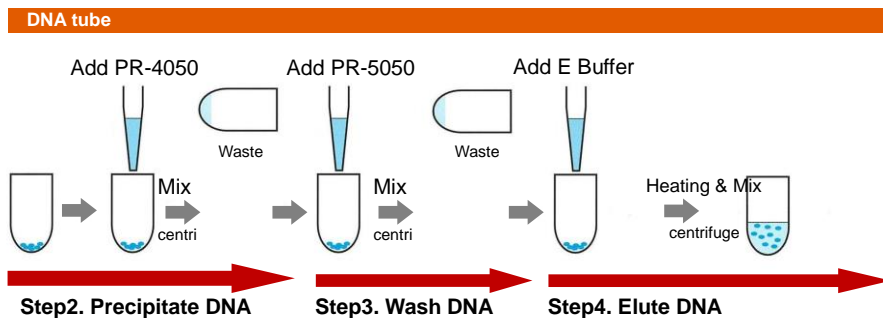
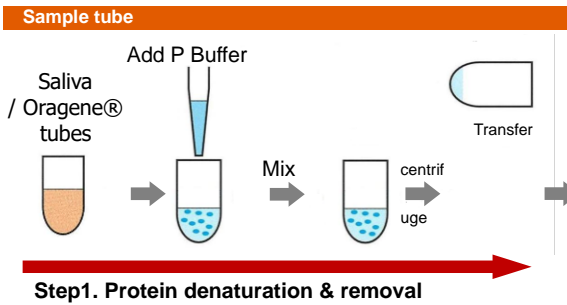
GENE PREP STAR NA-480α / NA-480 PLUS (KURABO) is an automated DNA extraction system that can purify up to thirty samples. The purpose of this study is to determine the DNA purification performance of the GENE PREP STAR NA-480α / NA-480 PLUS with saliva samples collected with the Oragene® kit.



### Materials and methods

<b>sample / volume</b>	Saliva collected with Oragene® / 2 ml
<b>Collection</b>	Incubate saliva sample / Oragene® tube as below conditions. 50°C Water bath: >1 hour* 50°C Air incubator: >2 hours* *Overnight incubation is acceptable.
<b>Extraction system</b>	Automated DNA isolation system GENE PREP STAR NA-480α / NA-480 PLUS
<b>Protocol</b>	SALIVA DNA V (NA-480α) / SALIVA+ 2ml V (NA-480 PLUS)
<b>Reagent kit</b>	NR-130, PR-4050, PR-5050
<b>Consumables</b>	Sample tube : NT-2100S, 1.2mL Tip :T-1100,
<b>Purification method</b>	Protein denaturation with non-phenol-based reagents DNA precipitation by salting out
<b>Process</b>	Step1. Protein denaturation & removal Step2. Precipitate DNA Step3. Wash DNA Step4. Eluate DNA (Standard elution volume: 500 µl)

**Workflow**



**Processing time** 10 sample: approx. 2.2 hours (NA-480α) / 2.7 hours (NA-480 PLUS)  
 20 sample: approx. 2.4 hours (NA-480α) / 2.9 hours (NA-480 PLUS)  
 30 sample: approx. 2.6 hours (NA-480α) / 3.1 hours (NA-480 PLUS)

**Analysis**

**Yield and Purity - Spectrophotometer** Using the spectrophotometer NanoDrop (Thermo Scientific), measure the absorbance spectrum of 230 nm (A230), 260 nm (A260), 280 nm (A280), and 320 nm (A320) of each isolates. Yield and purity are calculated as below.

**PCR amplification efficiency** Real-time PCR analysis was performed under the following conditions to confirm the amplification efficiency of the product.

System : Quick Real-time PCR System Model GF-Q150 (KURABO)

Target gene : Human *GAPDH* (Amplicon size: 452 bp)

PCR Conditions :

Step	Temp&time	Cycles
Pre-denaturation	95 °C, 30s	1
denaturation	95 °C, 5s	40
annealing	60 °C, 10s	
extension	72 °C, 10s	
melt analysis	95 °C, 5s	1

**Results****Yield and Purity**

Donor	Purity (A260/280)	Yield (μg)
A	1.824	73.6
B	1.843	35.0
C	1.717	7.2
D	1.764	173.3
E	1.831	19.6
F	1.734	91.6
G	1.812	37.7
H	1.739	145.2
I	1.850	35.7
J	1.778	37.0
K	1.837	21.1
L	1.873	13.7
M	1.785	106.5
N	1.830	71.6
O	1.804	77.2

**PCR amplification** Confirmed the amplification of the target gene Human *GAPDH*

**efficiency** Ct value : 18-19 \*template : 10 ng

**Note**

Please note that in case of purifying DNA from human saliva, the results of purification may differ significantly depending on the storage condition of the sample and individual differences.

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