

## Technical Notes

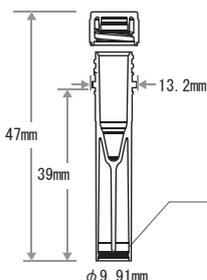
### DNA adsorption test (FastGene® 0.5 mL Screw cap tube)

- Purpose : FastGene® screw cap tubes (0.5 mL free-standing) were tested for their DNA adsorption over the cryopreservation
- Evaluation method : Measurement of DNA concentration in FastGene screw cap tubes before and after cryopreservation
- Rated product : FastGene® 0.5 mL Screw cap tube (Cat. No. FG-SCR-05B)

#### Used equipment and reagents



FastGene™  
0.5mL  
Screw cap tube  
(Cat. No.  
FG-SCT-05B)



Material	Pure polypropylene
Temperature range	-80°C ~ +121°C
Sterilization	Lot sterility assurance/radiation sterilization
DNase&RNase free	Lot guarantee/ethidium bromide (EtBr) Analysis by agarose gel electrophoresis

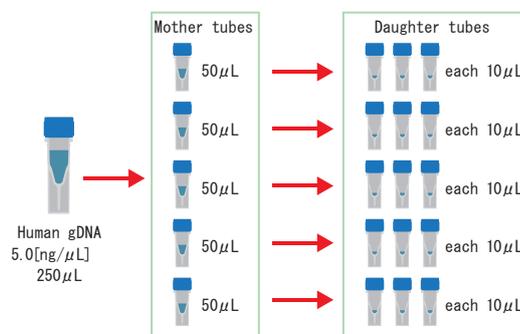


Optimal convex structure beneath - for the 2D bar code

#### Experimental procedure

<Estimation procedure>

- ① Human genomic DNA was 20-fold diluted in order to create a 250 µl solution with a concentration of 5.0 ng/µl
- ② Each time 50 µl of this DNA was dispensed to 0.5 ml screw cap tubes. As result 5 mother tubes were created.
- ③ For the measurement of DNA concentration in the mother tubes after dispensing a Qubit was used.
- ④ 10 µl from each mother tube was dispensed to three daughter tubes.
- ⑤ After dispensing the daughter tubes were stored for 24 h at 4 ° C.
- ⑥ After vortexing and short spin-down, the concentration of each daughter tube (5 x 3 daughter tubes = 15 tubes) was measured with Qubit.
- ⑦ The mother tubes DNA concentration was determined as 100 % and the daughter tubes concentration was compared with it.



#### Result

DNA conc. mother tube [ng/µL]	DNA conc. daughter tube [ng/µL]	DNA conc. changing[%]
5.08	5.18	101.84
	5.22	
	5.12	
5.22	5.24	99.49
	5.14	
	5.20	
5.20	5.22	100.90
	5.24	
	5.28	
5.28	5.32	100.63
	5.32	
	5.30	
5.18	5.34	102.19
	5.24	
	5.30	
Average	5.19	5.24

#### Conclusion

In order to ascertain whether the difference between the mean values of DNA concentration of the mother and daughter tubes is statistically significant a two-sided t-test with a 5 % significance level was implemented:

$$p=0.16 > 0.05$$

As result there was no significant difference in the mean values observable.

#### Summary

The DNA concentration in FastGene 0.5 mL screw cap tubes shows little or no change, so that the tubes could be used without problems for DNA experiments.

You can add later 2D inserts to the FastGene® screw cap tubes for managing your tube storage by a bar code system. The inserts also fit in storage tubes from other companies if you want to change tubes but of course there is no need for transfer.

#### First:

- Use storage tube without a barcode.
- Freeze tube (up to -80 °C)



#### Anytimes:

- Add 2D bar code insert
- Upgrade to 2D insert tube