

Technical Data Sheet

FastGene® RNA Kit - RNA stability of samples stored in RL-lysis buffer (3 months)

- Objective:** The stability of RNA was analyzed by comparing the yield, the 28S/18S ratio and the RIN score of samples stored at -20 °C or -80 °C, after dissolving and homogenizing the cells in the FastGene® RNA Kit Lysis buffer
- Products:**

FastGene™ RNA Basic kit	6 Preps Cat.No.FG-80006
	50 Preps Cat.No.FG-80050
	250 Preps Cat.No.FG-80250

It is important to completely homogenize cells / tissue before freezing. If homogenization is not carried out sufficiently, yield, RIN score, etc. may be significantly lowered.

Background

Ideally, the extraction of the RNA and the subsequent analysis should be carried out as quick as possible, since the RNA degrades very quickly. Depending on the timing of an experiment, it can be very difficult to perform the purification, since a series of steps have to be performed to extract the RNA making the quick processing of the samples very difficult.

It is of general knowledge that RNA can be preserved by storing in preservation solutions before extraction, freezing at -80 °C or dry ice, or by homogenizing the cells in lysis buffer.

Here, we investigated the possibility of storing the RNA in the cell lysis buffer RL at -20 °C or -80 °C and compared the yield of RNA, 28S/18S ratio and the RIN score to RNA extracted from directly frozen cells. Additionally, the results were compared to results obtained with the RNA kit of Competitor Q, as a reference.

Equipment / Reagent used for evaluation test

FastGene® RNA Basic kit

- 6 Preps Cat.No.FG-80006
- 50 Preps Cat.No.FG-80050
- 250 Preps Cat.No.FG-80250



FastGene® RNA Premium kit

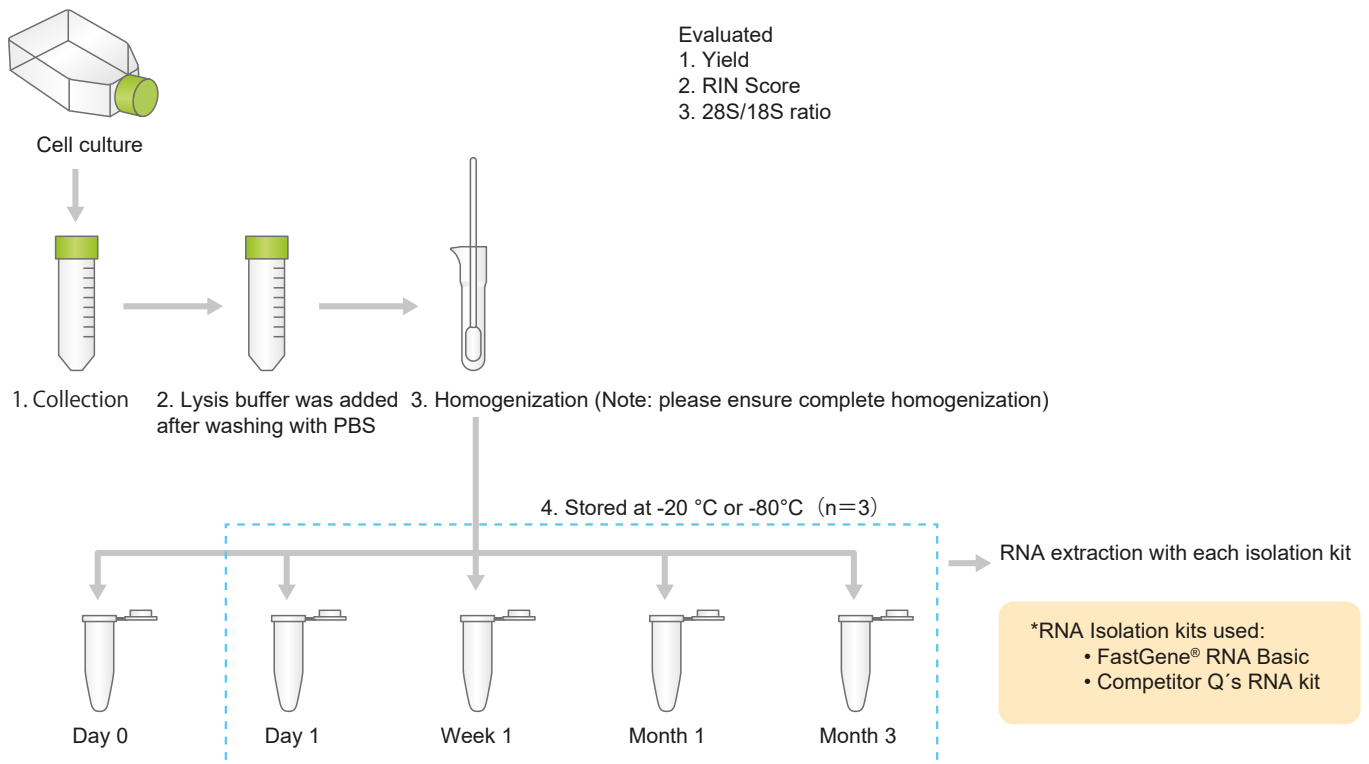
- 6 Preps Cat.No. FG-81006
- 50 Preps Cat.No. FG-81050
- 250 Preps Cat.No. FG-81250



Lysis buffer (RL) of the FastGene® RNA Basic kit is used for this evaluation. FastGene® RNA premium kit also contains the same buffer.

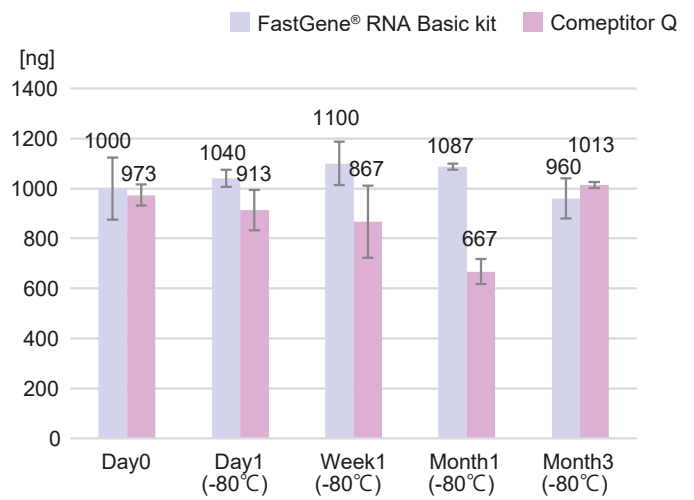
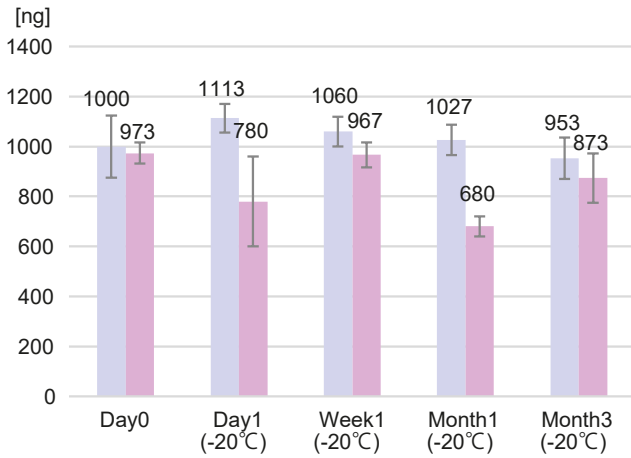
For the difference between the two kits, please see the next page.

Experimental conditions

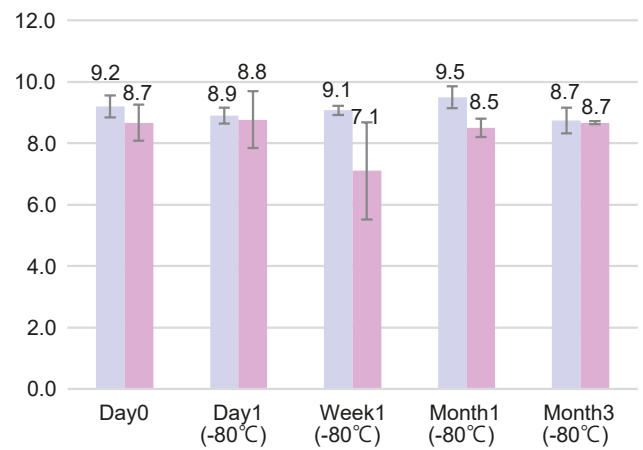
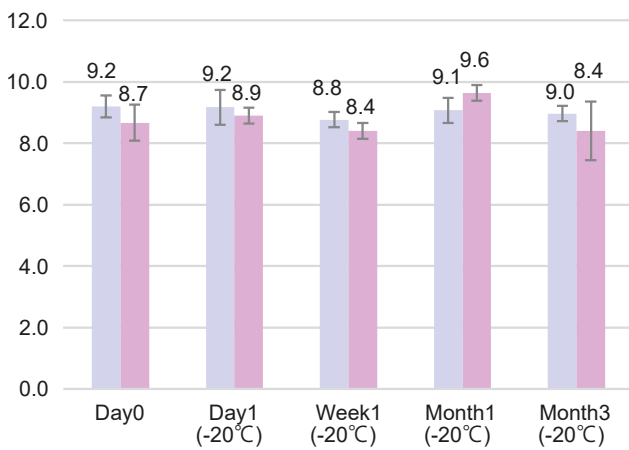


Results

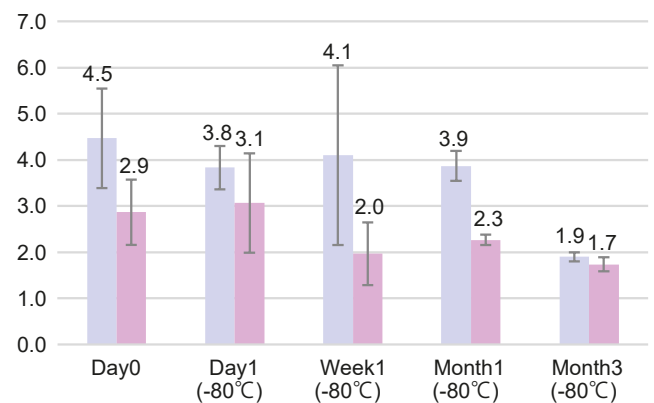
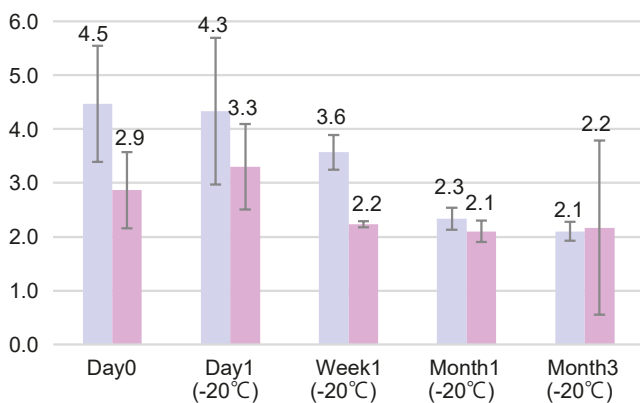
1. Yield



2. RIN Score



3. 28S/18S



The RNA Yield and RIN score of a freshly prepared RNA isolation did not change when stored at -20 °C or at -80 °C for up to 3 months. Both Yield and RIN score showed equivalent or better results than competitor Q's RNA kit. The 28S/18S analysis showed a small reduction after each time point measurement. Still, the values obtained with the FastGene[®] RNA basic kit were far superior to the ones obtained with Competitor Q's.

The same lysis buffer is used in the FastGene[®] RNA Premium Kit. Hence, similar results can be expected.



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