DNA-500

DNA-1000

DNA-2500

RNA

Total RNA Analysis Using the RNA Reagent Kit

In total RNA analysis using the MCE-202 MultiNA, 18S-rRNA and 28S-rRNA are correctly recognized based on the calibration curve information obtained from the RNA 6000 ladder.

K. Suzuki

Introduction

In RNA research, it is necessary that the status of the RNA quality be known at all times to ensure that RNA decomposition due to RNase activity has not occurred. Here we introduce an example of analysis of eukaryotic total RNA.

Results

Figure 1 shows the analysis results of Rat Heart Total RNA and the RNA 6000 Ladder using the MCE-202 MultiNA. For the Total RNA sample (upper), in addition to the lower marker (LM), two peaks are visible in the vicinity of 37% and 66% along the migration time index. From their positional relationship to the ladder peaks, these two peaks are clearly of 18S-rRNA and 28S-rRNA origin, respectively. The automatic evaluation results for the peaks are annotated at the peaks' apexes in the electropherogram, and these clearly indicate that the 18S-rRNA and 28S-rRNA are correctly identified.
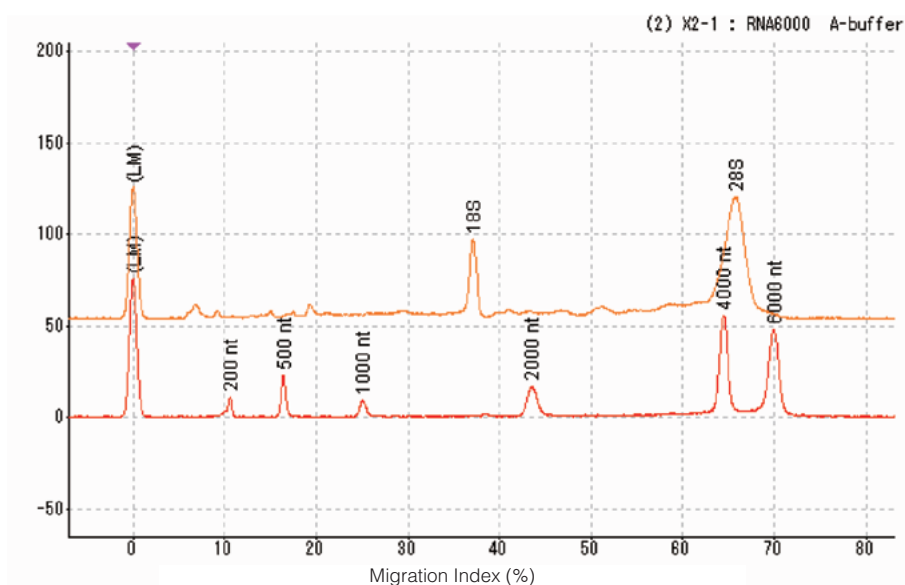

Migration Index (%)

Fig. 1 Electropherogram of Rat Heart Total RNA and RNA 6000 Ladder Using the RNA Reagent Kit for MultiNA

⬤ Analytical Conditions and Procedure

Instrument: MCE-202 MultiNA
Analysis mode: RNA premix
Sample: Rat Heart Total RNA
                  (Applied Biosystems) AM-7916
                  Diluted 50:1 with THE RNA Storage
                  Solution

Reagents:

- RNA Reagent Kit for MultiNA
  (Shimadzu)   P/N 292-27913-91
- SYBR® Green II nucleic acid gel stain
  (Invitrogen)   S-7586
- UltraPure® Formamide
  (Invitrogen)   15515-026
- RNA 6000 Ladder
  (Applied Biosystems)   AM-7152
- THE RNA Storage Solution
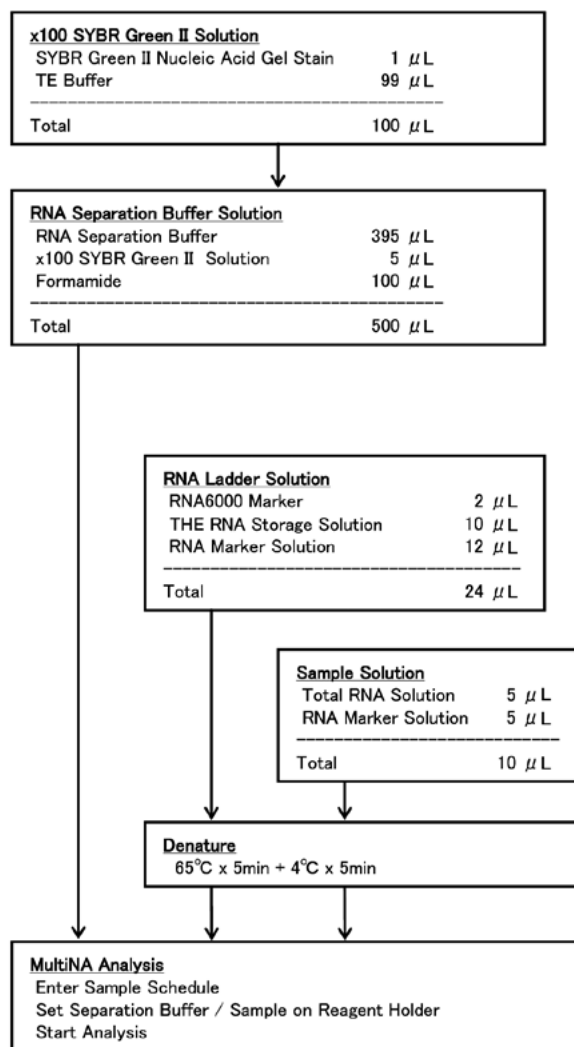 (Applied Biosystems)   AM-7001

Experimental Method:

Fig. 2 Experimental Procedure (for 6 Samples)

(Note) For detailed operational information related to analysis using the MCE-202 MultiNA, please refer to the MCE-202 MultiNA Instruction Manual.