

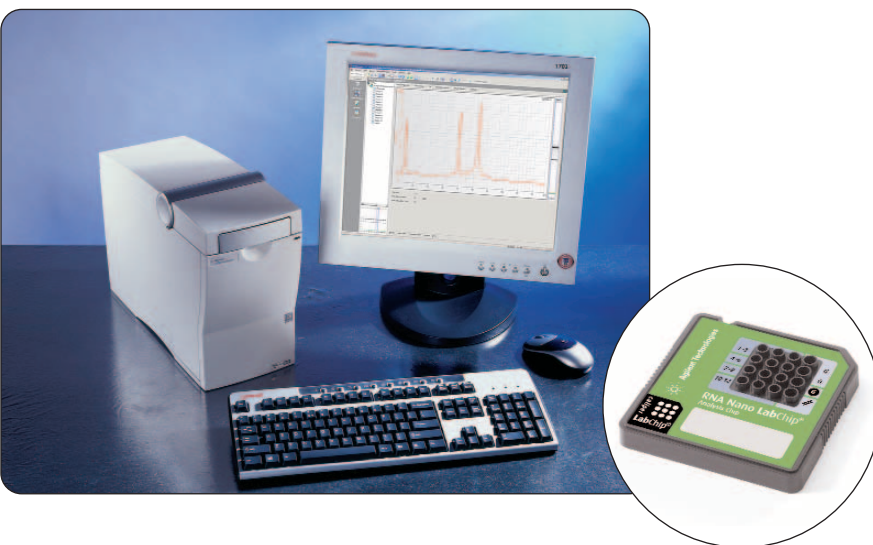
RNA LabChip kits

Fast quality control of RNA with minimal sample consumption

Do you check the quality of your total RNA preparation after isolation? Are you confident about the quality of your mRNA or Cy5 labeled RNA? Agilent offers RNA assays that allow characterization of total or mRNA samples and estimation of their concentrations within minutes, with only a few nano- or picograms of sample.

Advantages of the LabChip approach

- **Minimal sample consumption** – use as little as 200 pg of total RNA for analysis, saving most of your valuable preps.
- **Faster results** – complete automated analysis of 11 or 12 samples in about 30 minutes
- **Improved assay accuracy and precision** – pre-packaged reagents and standardized assay protocols yield highly accurate and reproducible data
- **Quick and easy sample comparison** – automated sample alignment,



- one-click overlay, scaling and zooming features
- **Conveniently archived and stored digital data** – easily share data with others and export it for publications or presentations
- **Alternative data display options** – results shown in gel-like image, electropherogram, and tabular formats

- **Easy-to-use** – simply load the chip, press "start" and the Agilent 2100 bioanalyzer does the rest.
- **RNase free** – uses RNase free reagents and chips to avoid sample degradation during analysis
- **Clean** – minimal exposure to ethidium bromide or other hazardous materials

Specifications	RNA 6000 Nano LabChip kit		RNA 6000 Pico LabChip kit	
Analytical specifications	Total RNA Nano	mRNA Nano	Total RNA Pico	mRNA Pico
Quantitative range	25-500 ng/μL	25-250 ng/μL	-	-
Qualitative range	5-500 ng/μL	25-250 ng/μL	200-5000 pg/μL	500-5000 pg/μL
Reprod. of quantitation	10 % CV	10 % CV	-	-
Maximum sample buffer strength	< 10 mM TE	< 10 mM TE	< 10 mM TE	< 10 mM TE
Quantitation accuracy	± 50 %	± 50 %	-	-
Physical specifications				
Analysis run time	30 minutes	30 minutes	30 minutes	30 minutes
Number of samples	12 samples/chip	12 samples/chip	11 samples/chip	11 samples/chip
Sample volume	1 μL	1 μL	1 μL	1 μL

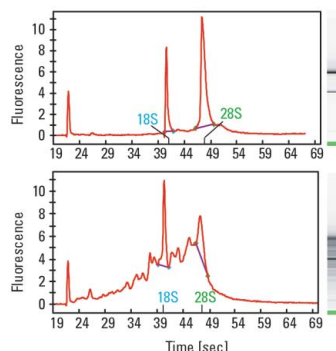


Agilent Technologies

Solutions for a wide range of applications

Quality of RNA

- Identify degradation of total RNA
- Identify degradation of mRNA
- High sensitivity with minimal sample consumption
- Unparalleled sensitivity in the picogram range



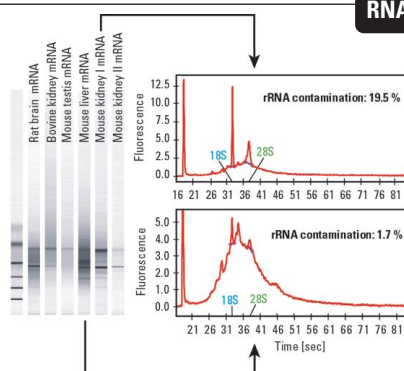
RNA 6000 Pico Assay

RNase degradation of RNA samples is a common reason for failed experiments. The Agilent 2100 bioanalyzer provides RNA quality control results in both gel-like image as well as electrophoretic data making it easy to detect even small degradation effects. Indications for RNA degradation are:

- Decreasing ratio of ribosomal bands
- Additional peaks below the ribosomal bands
- Decrease in overall RNA signal
- Shift towards shorter fragments

Purity of mRNA samples

- Detect and visualize ribosomal RNA contamination in mRNA samples
- Determine the percentage of ribosomal contamination

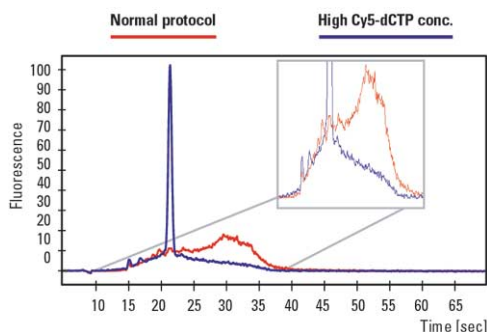


RNA 6000 Nano Assay

Many applications, such as cDNA synthesis for library construction or RT-PCR profit from highly enriched mRNA. The RNA kits allow the visualization of small impurities of ribosomal RNA in mRNA samples. The percentage calculation of ribosomal contamination and a good estimate of RNA concentration are also shown. All of this can be achieved with minimal amounts of sample.

Optimization of Cy5 labeling reactions

- Compare different labeling protocols
- Estimation of size distribution for Cy5 labeled samples



In the context of microarray technology, RNA samples are labeled before hybridization onto the array. The labeling efficiency is critical to the quality of the data obtained from the hybridization experiment. The overlay function of the Biosizing software provides a comparison of different labeling protocols for Cy5 labeled samples allowing you to choose the one that gives optimal yield.

LabChip kits for the Agilent 2100 bioanalyzer are available for the analysis of DNA, RNA, proteins and cells.



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