RNA INTEGRITY ANALYSIS

The Agilent 2100 Bioanalyzer system provides sizing, quantitation and quality control of DNA or RNA samples. The electrophoretic assays are based on traditional gel electrophoresis principles that have been transferred to a chip format. The chip format dramatically reduces separation time as well as sample and reagent consumption. The system provides automated sizing and quantitation information in a digital format.

For DNA assays, quantitation is done using the upper marker. The area under the upper marker peak is compared with the sample peak areas. Because the concentration of the upper marker is known, the concentration for each sample can be calculated.

For RNA assays, quantitation is done with the help of the ladder area. The area under the ladder is compared with the sum of the sample peak areas. For total RNA assays, the ribosomal ratio is determined, giving an indication on the integrity of the RNA sample. Additionally, the RNA integrity number (RIN 1 to 10) can be used to estimate the integrity of total RNA samples based on the entire electrophoretic trace of the RNA sample, including the presence or absence of degradation products. RNA integrity is completely necessary for gene expression analysis either with microarrays or through Real Time PCR.

SPECIFICATIONS

NANOCHIPS

Quantitative range	Total RNA: 25-500 ng/µl mRNA: 25-500 ng/µl
Qualitative range	Total RNA: 5-500 ng/µl mRNA: 25-500 ng/µl

PICOCHIPS

Qualitative range	Total RNA: 50-5000 pg/µl mRNA: 250-5000 pg/µl

Sample requirements:

Users should bring 3 µl of RNA or DNA (10 -2000 ng/µl) in 1.5 ml tubes. 1 µl will be used for Nanodrop quantification and 1 µl for Bioanalyzer analysis. If you do not have enough sample, please contact us.

Order number for IIBm users is compulsory. Order number can be purchased through the Lab Store Department web page (look for Genomics Services). For further information please contact: genomica@iib.uam.es

After your samples have been processed you will receive an email with the results (sample concentration, 260/280 and 260/230 ratios) together with RIN profiles pdfs.