

## Microarray Gene Expression RNA Guidelines.

### Project Management.

- Once a project has been accepted a project code and a project coordinator will be assigned to it and all queries will be dealt with by that individual.

### Sample Preparation.

- No specific kit or protocol is specifically recommended.
  - Suitable kits include Trizol, RNAeasy, miRNAeasy, Ribopure, TRIreagent.
- A protocol or kit which provides high quality RNA and sufficient yield are the main criteria.

### RNA Quality.

- Edinburgh Genomics will assume RNA quality will have been checked before shipping unless previously discussed.
- Ideally the quality of the RNA will have been checked by electrophoresis either using the Agilent Bioanalyser or equivalent. Please indicate on the sample submission form if Bioanalyser traces or equivalent are available, if they are please supply us with a copy.
- The RNA should have a RNA integrity value (RIN number) >7.0
- The RNA should have a 260/280 ratio between 1.8 and 2.1 preferably 2.0, and a 260/230 ratio > 1.0
- Example traces of Good, borderline and poor RNA are shown in figure 1

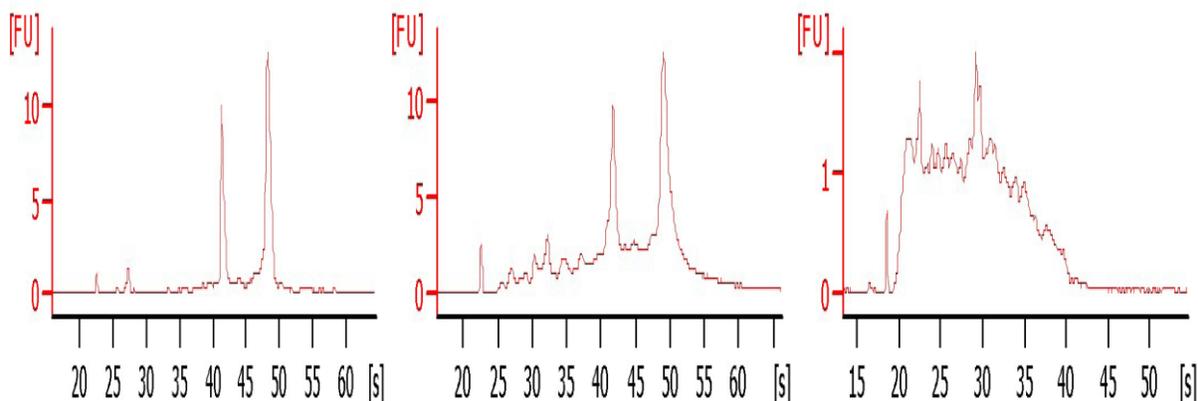


Figure 1 Traces from Agilent Bioanalyser Nano RNA chip, A) acceptable RIN 9.5, B) acceptable RIN 7.2 and C) not suitable RIN 2.0

### RNA Quantification.

- Quantification using a fluorescent based assay such as Ribogreen or Qubit are preferred. Other methods such as spectrophotometers (Nanodrop) can be less accurate, leading to variable results. If using this method please add double to ensure sufficient RNA is sent.



#### RNA Requirements and Shipping.

- Minimum concentration of RNA required for Affymetrix Gene arrays = 180ng/ul
- Minimum concentration of RNA required for Affymetrix IVT arrays = 50ng/ul  
If you are not sure of the platform being used please check with Edinburgh Genomics
- A minimum volume of 11  $\mu$ l of each sample should be sent
- When your samples are ready please contact the project co-ordinator who will then send the following:
  - Samples sent in individual tubes.
    - A set of sterile tubes for you to send your samples in.
    - A set of Barcoded labels for the tubes.
    - A Sample form (SF2). For you to supply sample specific information. Please fill in the requested details and return an electronic copy to Edinburgh Genomics. Also please print a hard copy to return with your samples

#### Return of Results.

- The results will be a series of the extracted image and sample files (.CEL and .ARR) sufficient for analysis using a range of open source and commercial software. A project QC report of the scanned arrays will also be included.