



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 kit or protocol is specifically recommended but it would assist the project if the extraction kit details are provided with the samples.
 - 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.
- 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 are available and, 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, bad and poor RNA are shown in Figure 1.

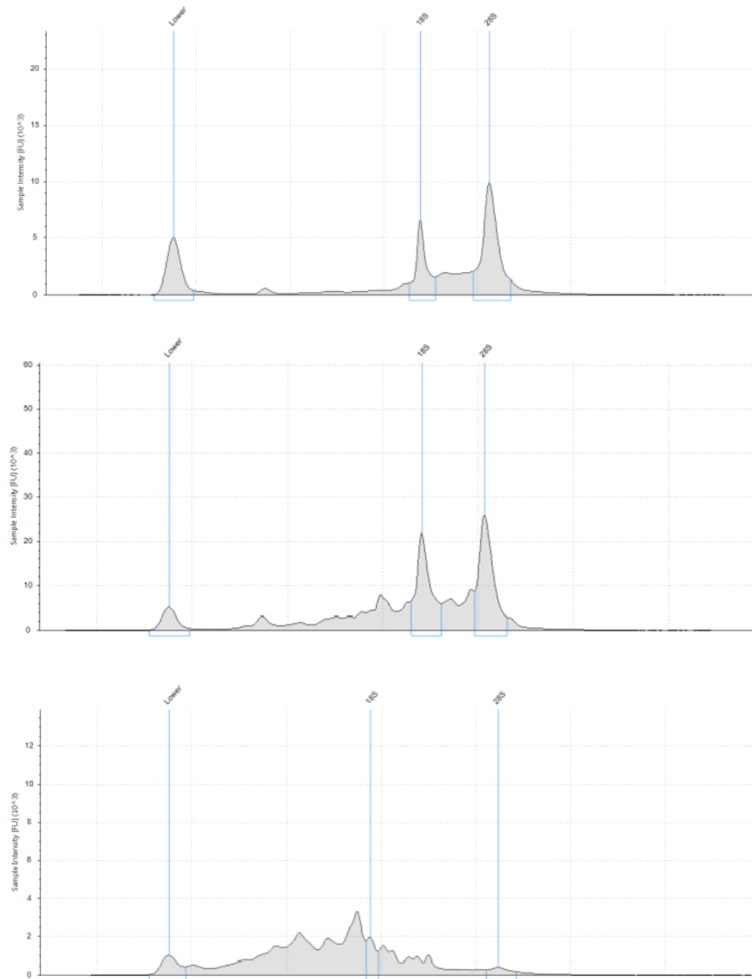


Figure 1. Traces from Agilent TapeStation, acceptable RIN 9.5 (top), acceptable RIN 7.1 (middle) and unacceptable RIN 2.2 (bottom).RNA Quantification and Requirements

- RNA samples should ideally be quantified by fluorescent-based RNA assay (e.g. RiboGreen or Qubit).
- Quantification using other methods such as the Nanodrop and Spectrophotometers can be less accurate leading to variable results. If using this method please add extra to ensure sufficient RNA.
- A minimum volume of 20 μ l of each sample should be sent at a minimum concentration of 180ng/ μ l for Affymetrix Gene arrays or 50ng/ μ l for Affymetrix IVT arrays.
- If you are not sure of the platform being used please check with Edinburgh Genomics.
- **If your samples fail to achieve the RNA quality or quantity required by Edinburgh Genomics or you are unable to test your RNA please contact us before sending samples.**



Shipping

- Please contact us before shipping your samples so that we can send sample sheets and labels to you and discuss the format of tubes or plates for the samples.
- When the samples are ready the project co-ordinator will send one of the following:
 - Samples sent in individual tubes.
 - A Sample form. Fill in the requested details and return and electronic copy to Edinburgh Genomics. Also make a hard copy to return with your samples.
 - Sterile screw top tubes for the samples.
 - A set of labels for the sample tubes. The sample form must be returned with your samples.
 - Sample tubes should be sent to Edinburgh Genomics at the address below by next day delivery on dry ice.
 - Samples sent in 96 well plates.
 - A Sample form. Fill in the requested details and return and electronic copy to Edinburgh Genomics. Also make a hard copy to return with your samples
 - A 96 well plate for the samples sealed with a self-adhesive seal or heat seal.
 - A set of plate labels for the sample plates. The sample form must be returned with your samples.
 - Please ensure that the plate seal is firmly in place around the edges to prevent leakage during shipping, wrap plate in bubble wrap and send to Edinburgh Genomics at the address below by next day delivery on dry ice.
- Address for shipping:
 - Edinburgh Genomics**
 - Ashworth Laboratories**
 - The University of Edinburgh**
 - Edinburgh**
 - EH9 3FL**
 - UK**
 - Telephone: +44(0) 131 651 7840**

Return of Results

- The exact format for results return will be discussed to meet individual requirements.