

NGS sample preparation and packing guidelines

Please read the guidance below carefully, as it could help to avoid delays, damage or degradation of your samples during shipment.

Sample preparation

All samples should be in clearly labeled microcentrifuge tubes or 96-well plates. Sample IDs should be written with a permanent marker and the IDs should be consistent with the order sheet. Please include a brief description of the extraction/purification protocol in the comments field of the sample order sheet.

DNA samples should be in TE buffer or diethyl pyrocarbonate (DEPC) water with a minimum concentration of 50 ng/μL and a volume of 10 to 15 μL. See also [sample QC criteria \(DNA\)](#).

RNA samples should ideally be prepared by ethanol precipitation using DEPC-treated water (stable for 1 year at -20 °C). See also [sample QC criteria \(RNA\)](#). We recommend the following protocol: add 0.1 volume of 10% 3 M sodium acetate (NaOAc, pH 5.5) to the RNA solution, mix gently, add 2 volumes of 100% ethanol to the RNA solution and mix gently. For example, if you have 100 μL of RNA solution, add 10 μL of 3 M sodium acetate and 220 μL of 100% ethanol.

Alternatively, RNA stabilizing reagents or kits can be used for shipping at room temperature. Use of these reagents needs to be stated in the comments section of the order sheet and recovery materials should be sent along with your samples (if applicable).

Packing samples

Tubes should be tightly sealed with parafilm and placed in secondary packaging. 96-well plates should be covered with thick high-quality aluminium foil followed by a plastic seal.

Tubes



Label your sample name on the side of the tube and top of the cap.



Wrap the lid tightly with parafilm to prevent evaporation.



Place sealed tubes in a 50ml conical tube and use tissue or cotton balls.

96-well plates



Place the 96-well plate on a rack.



Seal the plate tightly with aluminium sealing film



For higher security, put an adhesive film on top and stick it tightly.

Packing the shipment box

It is important to avoid samples moving during shipping. You can do this for example by adding tissue paper or other filler materials to the box. Depending on the nature of your samples, shipping should be arranged with dry-ice cooling (label required), ice pack cooling or no cooling.

- DNA samples: Ice packs
- RNA samples: 5 to 8 kg of dry ice
- RNA (stabilized): Room temperature
- Prepared libraries: Ice packs



All cooled samples should be placed in a polystyrene box, which, in turn, should be placed in a cardboard box. When sending samples at room temperature, only a cardboard box is sufficient.

You have the option to send portable hard drives for your data along with your samples. These should always be empty and formatted before shipping. Portable hard drives **cannot** be shipped together with dry ice, but sending with ice packs is possible.

Always include the sample order sheet (with QC files if available) with your shipment!

All samples and data may be discarded 3 months after the data has been delivered to you. However, you can make a special request to extend the storage period.

Your Macrogen representative will provide you with detailed information about addressing, labeling and shipping your box. For more information about how we process your samples, please visit macrogen-europe.com/support.