Protocol DNA shipment for the Illumina GDA ePGX Array

It is important to follow this protocol when sending DNA samples to the Genomics Core Facility of Erasmus MC. Some of the steps might seem obvious, but we want to be sure the DNA samples arrive in good quality and format. **Please note that any deviation from this protocol could lead to us sending back the samples.**

When we receive the samples we will start the genotyping procedure as soon possible.

Step 1

- The DNA samples should be measured with a fluorescent based method like Picogreen.
- Dilute the DNA samples to a concentration of 20 ng/ul. For the GDA ePGX procedure we need 2x 5 ul of each sample. So dilute to a volume of at least 10 ul.
- Aliquot the first 5 ul (20 ng/ul) in a Abgene storage plate. Do not include blancs. If you do include blancs, these will be run as samples and charged for accordingly

  IMPORTANT: The whole genotyping procedure is automated on robotic systems. As such, it is VERY important to use Abgene 96 deep wells plates:

  Abgene Storage Plate, 96-well, 0.8 mL, transparent, individually wrapped
  Catalog #: AB0765
  Catalog #: AB0859

- Aliquot another 5 ul (20 ng/ul) in a Bio-rad semi-skirted PCR plate. Use the **same** sample layout as in the previous step.

  IMPORTANT: The whole genotyping procedure is automated on robotic systems. As such, it is VERY important to use Bio-Rad semi skirted PCR plates:

  Hard-Shell High-Profile 96-wells semi-skirted PCR plates
  Catalog #: HSS9641

- Label the two plates with the same DNA samples exactly the same! Please use stickers for this and add the following information:

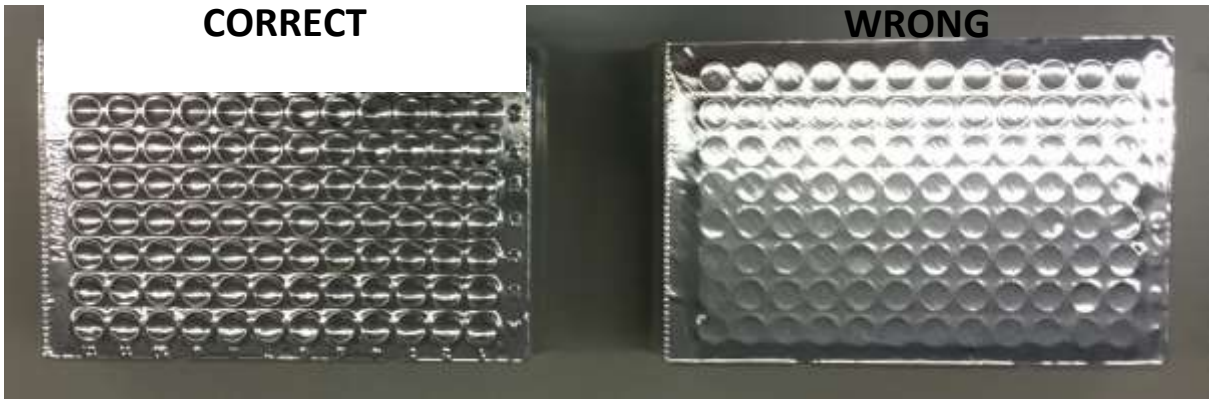
  GDA contract number
  Plate number
  Research Centre / study name

Step 2

- Apply an aluminum seal to the plates. Please be sure to use a seal that sticks well (the seals below sticks sufficiently). Do **NOT** use heated seals, because these are difficult to remove.

Microseal® 'F' PCR Plate Seal, foil, pierceable
Bio-rad
Catalog #: MSF1001

- It is very important to seal the plates well. Use a roller for this. Pay special attention to the sides of the plate. In the picture below you see an example of what it should look like.



Step 4

- To prevent the seal from loosening during shipment on dry ice, wrap the plates in parafilm (see picture below).

Step 5

- Place the plates in plastic bags and put them in sufficient dry ice.

Step 6

- Complete the following files before sending the samples.

File 1. 96 wells layout of samples in Excel format, that provides information indicating contract number, well-assignments and corresponding sample identification (e.g. bar code information or sample ID).

File 2. Agarose gels of the DNA integrity or Tapestation results on a subset (5 %) of the study.

File 3. 'Samplesheet.xlsx' file for our LIMS system, containing list verifying concentrations, volumes, sample ID, and contract number. This file will be provided along with the 'Samplesheet file instruction').

Important considerations for sample IDs

For efficient processing of your samples, we recommend you to keep a few guidelines in mind concerning sample IDs. Most genetic software are unable to handle sample IDs including these features and will generate errors. Also tracking systems and Excel might recode sample IDs with these features. It is fixable post data-generation but this is error prone. When making your sample IDs please avoid the following:

- Special characters in sample IDs (e.g., 12.34 or 12,34 or 12_34 should be 1234)
- Spaces in sample IDs (e.g., 12 34 should be 1234)
- Number IDs starting with one or multiple '0's (e.g., 01234 should be either 1234 or a01234)
- Duplicate IDs. If a sample has been run twice please add an addition to the IDs (e.g., 1234a and 1234b)

In general we advise to use a combination of numbers and letters, and avoid special characters, symbols and spaces.

Step 7

- Before sending samples, first send the files above to genomics-arrays@erasmusmc.nl. Only send samples to the Genomics Core Facility, when she has approved all files.

Step 8

- Ship to the following address:

Erasmus MC
Genomics Core Facility
Att: Mila Jhamai/Michael Verbiest
Room Ee 575
Westzeedijk 353
3015 AA Rotterdam
The Netherlands
010-7043645 / 010-7043575

Please keep close contact with our lab at the numbers below when shipping the samples. Report exact time, date, shipment number etc. before sending the samples. We will notify you upon receiving the samples.

Contact information

Mila Jhamai
Michael Verbiest

Erasmus MC
Genomics Core Facility
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3015 AA Rotterdam
The Netherlands

Phone: +31(10) 7043645 (Mila Jhamai)
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For general questions regarding projects, please contact the contract- and project manager dr. Gaby van Dijk (g.m.vandijk@erasmusmc.nl or genomics@erasmusmc.nl).