

## DNA Preparation Requirements for GoldenGate SNP Genotyping

- Dilute purified genomic DNA in 10mM Tris-HCL pH 8.0, 1mM EDTA (TE).
- **Concentration\***: at **50ng/μL** or greater (50~100 ng/μL).
- **Volume**: depends on the number of OPA (one "OPA": A single multiplex of up to 1,536 SNPs): **25 μL** for the first OPA, 5 μL for each additional OPA.
- **Placement: 96-well-plate** or individual tubes/vials (0.5 - 1.5 ml) in **96-well-tray** (8 by 12).
- Maximum number of project samples in a single 96-well-plate or 96-well-tray: **92**; four internal quality control DNA samples will be used for each 96-well-plate or 96-well-tray samples. The four DNA controls may be one trio (mother, father and offspring) plus one member of the trio. Currently MGC has five trios available.
- You may assign positions to quality control samples randomly; or leave wells A01, B01, C01, and D01 empty for control samples.
- Avoid placing same group of project samples (like cases) together: for example, do not place the same group of samples only on certain area of a plate, or have one plate only contain the same group of project samples.
- Please place DNA samples into plate(s) only after MGC reviews sample sheet.
- One sample sheet for all the plates. Comma separated CSV, Excel or tab delimited txt format is acceptable.
- Sample sheet columns: highlighted fields (Bold font) are required. GoldenGate\_SampleSheet\_Template.csv is available for download on the MGC OAD (Open Access Document) webpage.
  1. **Sample\_ID**: required; must be unique and contains no space. MGC will enter sample\_ID for quality control sample.
  2. SentraxBarcode\_A: to be entered by MGC.
  3. **SentraxPosition\_A**: required; must be matched to the corresponding Sample\_Well. Please keep the original order for both columns of SentraxPosition and Sample\_Well. (e.g., SentraxPosition R001\_C001, is matched to Sample\_Well A01)
  4. SentraxBarcode\_B: required if there is a second OPA; or one can make another sample sheet.
  5. SentraxPosition\_B
  6. **Sample\_Plate**: required; name of sample plate; must be unique and less than six characters.

7. **Sample\_Well:** required; well position of a sample (e.g., A01).
  8. Sample\_Group
  9. **Gender:** preferred when approved by IRB. Enter M or Male for Male, F or Female for Female.
  10. Sample\_Name
  11. Replicate: refer the Sample\_ID.
  12. Parent1: refer the Sample\_ID.
  13. Parent2: refer the Sample\_ID.
  14. **Concentration (ng/μL):** required.
  15. **Volume (μL):** required.
- Please seal, secure lid and freeze the DNA plate for shipping.

*\* Illumina recommends the Molecular Probes PicoGreen® assay for quantitation of dsDNA samples. We use [NanoDrop](#) ND-1000 Spectrophotometer to double check the DNA concentration.*