Axiom DNA Requirements

Requirements Before Submitting DNA Samples for Axiom Genotyping Plates

- 200 ng of DNA at a concentration of 10 ng/µl µl is required for each sample that is turned in. That is 20 ul of DNA at 10 ng/ul.
- All samples should be in a Beckman Coulter deep well plate (catalog # 267007). Plates should be securely sealed when shipped. Thermo Scientific plates seals (catalog # AB-0558) work well.
- Starting DNA must be double-stranded for the purpose of accurate concentration determination. DNA must be of high purity. DNA should be free of DNA polymerase inhibitors. Examples of inhibitors include high concentrations of heme (from blood) and high concentrations of chelating agents (i.e., EDTA). The concentration of EDTA in the sample should be 0.1 mM or below. The gDNA extraction/ purification method should render DNA that is generally salt-free because high concentrations of particular salts can also inhibit enzyme reactions. DNA purity is indicated by OD260/OD280 and OD260/ OD230 ratios. The OD260/OD280 ratio should be between 1.8 and 2.0 and the OD260/OD230 ratio should be greater than 1.5.
- DNA must not be degraded. The approximate average size of gDNA may be assessed on a 1% agarose gel using an appropriate size standard control. Approximately 90% of the DNA must be greater than 10 Kb in size. Control DNA is provided with each Axiom kit from Affymetrix. It is highly recommended to run a control on each plate. Typically an investigator leaves one well empty on a plate and then I add the control DNA to the empty well before starting.