DNA Quality Assessment FAQ:

Agilent Bioanalyzer 2100:
DNA quality assessments are essential for analysis using Massively Parallel Sequencing. The Agilent Bioanalyzer 2100 system allows for accurate quantitative and qualitative assessment using small sample volume inputs. As little as 1ul at 200 pg/ul is required per analysis. DNA degradation and sizing is determined using a standard run on each chip. DNA concentration, degradation, successful fragmentation, fragment sizing and distribution, and purity (ex. adaptors) can be easily and reliably detected by this technology.

The microarray facility will run up to 12 samples for $35 on one Bioanalyzer assay chip (either a HS DNA or DNA 1000). If you choose to run fewer samples than this, the cost will still be $35.

Why do I need to test the quality or sizing of my DNA?
Assessing DNA ensure that the sample input are a quality, size, and purity that will generate usable reproducible endpoint data. Massively Parallel Sequencing requires clean fragmented DNA, this technology provides information for quality assessment before sequencing.

What is included in the DNA assessment report? The DNA assessment report includes an electropherogram trace, total concentration, and peak table with concentrations. This DNA concentration is fairly reliable but should be used in conjunction with a NanoDrop or Qubit. You must request “Quantification” in your order to receive accurate quantification. Quantification requests on Bioanalyzer orders are analyzed to display the whole sample concentration, concentrations provided which have not been requested are not reliable. If you forget to request quantification please email our lab and we can adjust your data.

Sample DNA quality assessment electropherogram from the Agilent 2100 Bioanalyzer:
Fragmented DNA sample with **adaptor peak** present.

Fragmented DNA **without adaptor peak** present. Ready for MPS.

Phenol contaminated DNA.