Method

Quantitative DNA analysis is either perfomered by 1) measuring the optical density (OD) at a wave length of 260 nm and 280 nm and/or 2) gel electrophoresis. Though being less accurate in quantitation, gel electrophoresis has the advantage to also allow a qualitative analysis.

To 1) Use quartz cuvettes. For a linear relationship between concentration and OD, OD values should lie between 0.1 and 0.5. Dilute the DNA solution if necessary. An OD_{260}=1 corresponds to ~ 50 µg/ml. The ratio of OD_{260}/OD_{280} should be ~1.8; smaller ratios indicate protein contamination.

To 2) Perform electrophoretic analysis in an 0.8-1.0% agarose gel. Use as DNA molecular weight markers a known amount (concentration) of standard DNA fragments up to 20-30 kb such as HindIII-digested phage lambda DNA which is commercially available.

The isolated DNA should appear as a distinct band of ~20 kb (a slight smear is acceptable, yet indicative for slight degradation).

Version	Tracking of changes	Name	Date