Quality Control Assay

16-Hour Incubation: A 50 µl reaction containing this reaction buffer at a 1X concentration and 1 µg of HaeIII digested φX174 RF I DNA incubated for 16 hours resulted in no detectable non-specific nuclease degradation.

Endonuclease Activity: Incubation of this reaction buffer at a 1X concentration with 1 µg φX174 RF I DNA for 4 hours at 37°C in 50 µl reactions resulted in less than 5% conversion to RF II.

Protease Assay: Incubation of at least 1X dsDNA Fragmentase Buffer with 0.2 nmol of a standardized mixture of proteins, for 20 hours at 37°C, resulted in no proteolytic activity detected by SDS-PAGE.

Phosphatase Assay: Incubation of 10 µl of at least 1X dsDNA Fragmentase Buffer in protein phosphatase assay buffer (1 M diethanolamine @ pH 9.8 and 0.5 mM MgCl₂) containing 2.5 mM p-nitrophenyl phosphate at 37°C for 4 hours yields no detectable p-nitrophenylene anion as determined by spectrophotometric analysis at 405 nm.