

Supporting Information

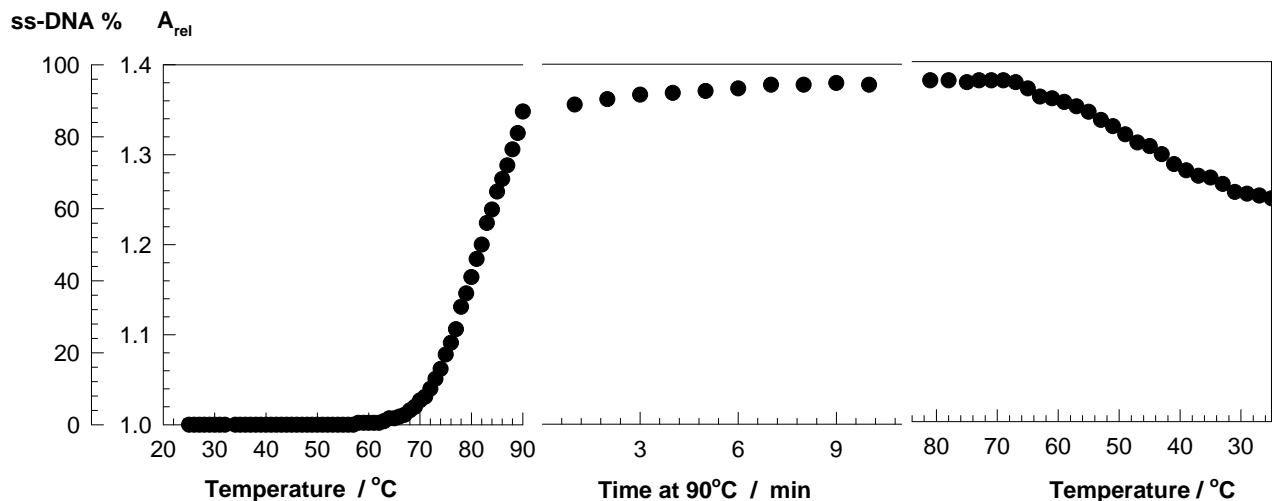


Figure S1. Thermal denaturation and renaturation curves of a dilute DNA solution (26 mg/l) in 4.0 mM NaBr. The normalized absorbance with respect to that measured at 25°C (A_{rel}) and the fraction of ss-DNA fragments (ss-DNA %) are shown as a function of temperature. The solution was heated from 25 to 90°C with a heating rate of 3.25°C/min, after keeping at 90°C for 10 min, it was cooled to 25°C with a rate of 1.1°C/min. ss-DNA % was calculated as $ss - DNA \% = 10^2 (A_{rel} - 1) / 0.4$. During the heating period, ss-DNA % increased up to 95 %, while during the cooling period it decreased to 60 %.

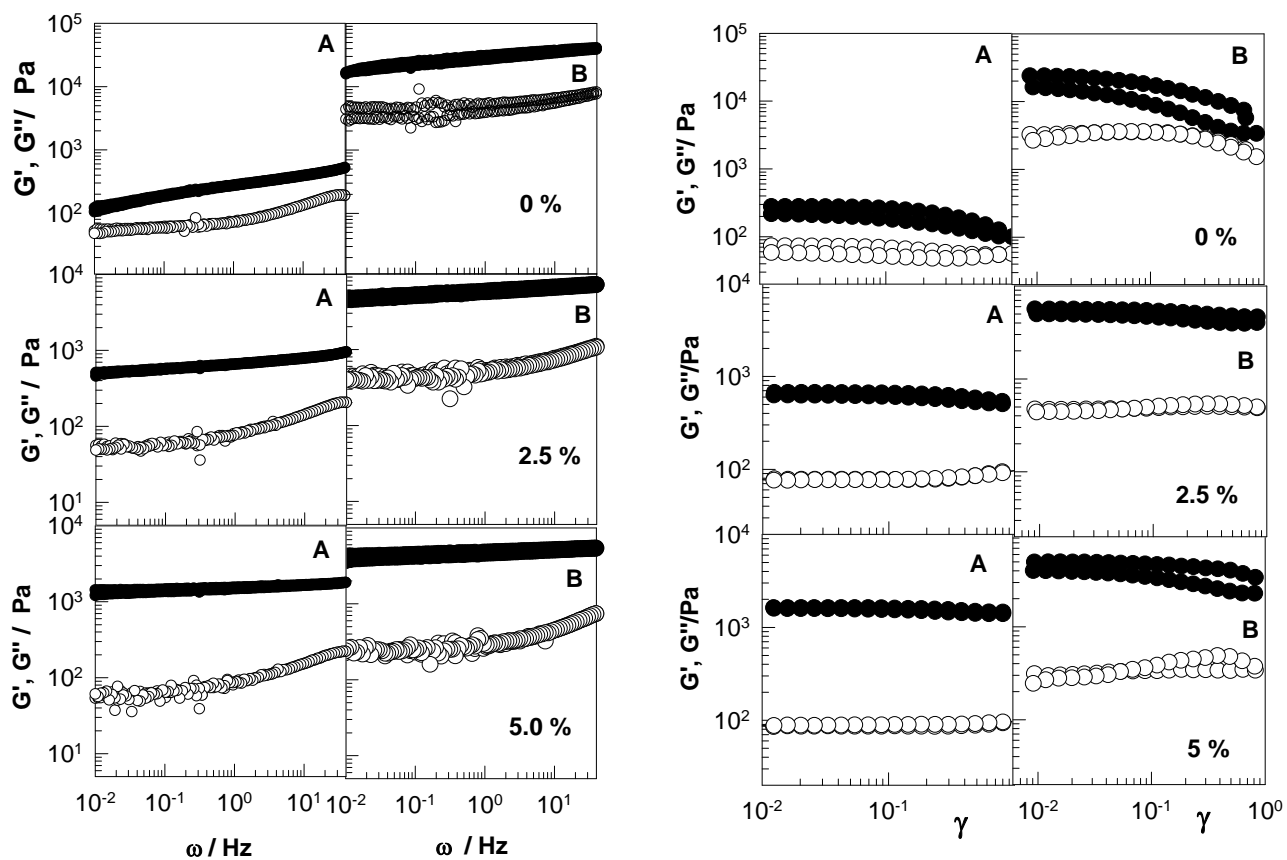


Figure S2. G' (filled symbols) and G'' (open symbols) of DNA gels at 25°C shown as a function of the frequency ω at $\gamma = 0.01$ (left) and strain γ at $\omega = 1$ Hz (right) before (A) and after the heating-cooling cycle (B). EGDE contents are indicated.

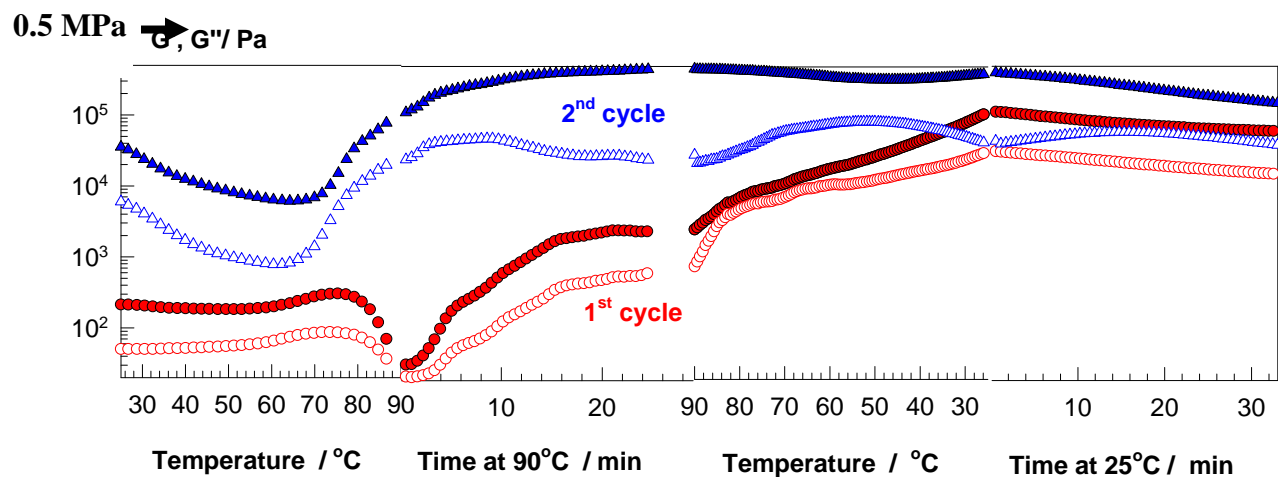


Figure S3. Viscoelastic behavior of DNA solutions (9.3 w/v %) during heating and cooling cycles. The duration of the heating period at 90°C is 25 min. $\omega = 1$ Hz. $\gamma = 0.01$. G' and G'' data are shown by the filled and open symbols, respectively. Red circles and blue triangles are data points obtained during the first and second cycle, respectively.