Abstract

The invention relates to a method for stripping undesired nucleic acid components from double-stranded DNA, in particular, super-coiled plasmid DNA. The method according to the invention is characterised by the steps: (a) providing a mixture containing completely and/or partly double-stranded nucleic acids and optionally single-stranded nucleic acids; (b) resuspening the mixture from step (a) in an aqueous, low-molarity buffer system with low ionic strength and weak buffer effect; (c) adjusting conditions in the mixture from step (b), under which the completely and/or partly double-stranded nucleic acids are denatured; (d) further addition of buffer and a polymer component to the mixture from step (c); (e) incubation of the mixture from step (d) for a time which is sufficient for the formation of an aqueous two-phase system having an upper and lower phase; and (f) removing the upper phase containing the single-strand nucleic acid and collection of the double-strand nucleic acid from the lower phase.

Fig. 2