Quick yeast genomic DNA extraction for PCR-based applications

This protocol is useful when you want to get gDNA sample from a single yeast colony or a very little amount of cell cultures for PCR-based applications. Keep in mind that the final sample includes a lot of RNAs also.

1. Suspend single yeast colonies (or small cell pellets) in 200 mM lithium acetate (LiOAc) 1% SDS solution.
2. Vortex and incubate samples for 15 min at 70°C.
3. Add 96% ethanol for DNA precipitation (finally 70% of ethanol conc).
4. Mix samples by brief vortexing.
5. Collect DNA by centrifugation (15,000× g) for 3 min.
6. Remove supernatant and wash the pellet with 70% ethanol.
7. Remove ethanol as much as possible by pipetting.
8. Suspend samples in 50 (or 30) uL dH₂O or TE buffer to dissolve DNA.
9. Remove the cell debris by centrifugation (15,000× g for 1 min).
10. Gently transfer only 45 (or 25) ul of supernatant into a new tube.

From a single colony, final concentration of gDNA is expected as 1-10 ng/L (Qubit).