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 100 L 200 mM lithium acetate (LiOAc) 1% SDS solution.
2. Vortex and incubate samples for 15 min at 70°C.
3. Add 300 L of 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 500 L 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).