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Lithium Acetate / SDS Extraction of Genomic DNA from Saccharomyces cerevisiae

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ABSTRACT

This protocol is just a quick description of the protocol provided by Looke et al., 2011 (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3182553/). The purpose of this protocol is simply to provide a quick and easy method to isolate genomic DNA from yeast for PCR-based applications. While it does not provide the purist genomic DNA that you can get, it is extremely quick and easy to perform.

PROTOCOL CITATION

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1 Pick one yeast colony from the plate or spin down 100-200 µl of liquid yeast culture (OD600=0.4). Suspend cells in 100 µl of 200mM LiOAc, 1 % SDS solution. Alternatively, you can spin down 100 - 500 uL of liquid culture at 3,000 rcf for 4 minutes and then resuspend the pelleted cells in 100 uL of 200 mM LiOAc, 1% SDS solution if you wish.

2 Incubate for 5 minutes at 70°C.

3 Add 300µl of 96-100 % ethanol, vortex thoroughly.

4 Spin down DNA and cell debris at 15,000 rcf for 3 minutes.

5 Resuspend the pellet in 70% ethanol. Then spin the resuspended DNA and cell debris mixture at 15,000 rcf for 3 minutes.

6 Dispose of the supernatant and then dissolve the pellet in 100 µl of H2O or TE and spin down cell debris for 15 seconds at 15 000 g.

7 Use 1 µl of supernatant for PCR.