

## Protocol:

- 1) Count the number of mini-preps that you intend to do. Read these instructions and label all the tubes/columns/collection tubes that you will need. If you have a guide written down (A=Day1, Timepoint 1, B = Day 1, Timepoint 2, etc...), then you can have the labels be very simple (A, B, C, D...etc).
- 2) For each mini-prep (**Plus one extra**) make a master mix of *Buffer1-Z*, each miniprep requires:
  - a) 400 uL of Buffer1 w/RNAse A
  - b) 4 uL of Zymolyase (5U/uL)E.g. Buffer 1-Z mastermix for 2 minipreps contains 1200uL of Buffer 1 w/RNAse A+12ul of Zymolyase
- 3) Add 400 uL of *Buffer1-Z* each pellet and resuspend by pipetting.
- 4) Incubate this sample at 37°C for **90 minutes**
- 5) After the incubation take 225 uL of the resuspended pellet and pipette it into a new labeled tube. Save the original tube/sample at -20°C.
- 6) For the new labeled tubes, add 300 uL of Buffer 2 to each sample and mix by inversion 6-8 times. Incubate this mixture at room temperature for **5 minutes**.
- 7) Add 350 uL of Buffer 3 to each sample. Immediately after the addition of buffer 3, mix the sample by inversion 6-8 times. It is important to **mix the sample as soon as possible**.
- 8) Pellet the lysate by spinning them in a benchtop centrifuge for 10 minutes at MAX RPM (don't forget the lid or it will be loud!).
- 9) As soon as possible after the spin has finished, decant the supernatant liquid onto a **pre-labeled** silica column sitting in a waste collection tube. Remember to label both the silica column and the waste tube that it sits in.
- 10) Spin the column at MAX RPM for 1 minute and discard the flow through (the liquid in the collection tube).
- 11) Add 500 uL of HBC Buffer to each column
- 12) Spin the column at MAX RPM for 1 minute and discard the flow through
- 13) Add 700 uL of DNA Wash Buffer
- 14) Spin the column at MAX RPM for 1 minute and discard the flow through
- 15) Discard the waste collection tube and use a 1.7 mL eppendorf tube as a new waste collection tube. Without adding any more solutions, spin the column again at MAX RPM for **2 minutes** and discard the flow through. **This step removes any remaining ethanol from the column and is very important.**
- 16) Discard the waste collection microfuge tube and transfer the silica column to a brandspanking **new**, 1.7 mL eppendorf (final collection) tube. Do not reuse the waste collection tube!
- 17) Add 30 uL of elution buffer to the middle of the column membrane and let the column sit at room temperature for 1 minute.
- 18) Spin the column at MAX RPM for 1 minute. Your plasmid DNA is now in the flow through.
- 19) Quantify your [DNA] with the nano-drop dsDNA tool and record your yields for your presentations and quality control steps.