1. Set alarms for taking the jars out of the incubation room on time.
2. Make sure there are enough dry and acid-washed vials.
3. First thing in the morning, ensure that there is sufficient 0.3M BaCl2 (400mL)
4. Make sure there is enough CO2-free DIW (400 mL) for replacing Mason jar water.
5. Also, make sure there is sufficient CO2-free DIW (>2L) for 0.09M KOH trap. Make more if necessary and cool in time.
6. Make sure there are enough hazardous waste bottles for the BaCl2 and its rinses (>2.9L).
7. Make sure the conductivity meter is ready to go (low battery?). It should be on temperature correction coefficient of 2.0%, relative to 25°C, with a calibration constant of 0.9295 cm-1.
8. Air out the calibration curve bottles for at least an hour.
9. Label all the tubes for first measurement. Tube labelling scheme will be ID#.day# - e.g., 24.2 for jar number 24 on day 2.
10. Add 5mL of BaCl2 to each tube using the 5mL pipette.
11. Take out trays on time:

1&2 out at 12:30 PM, measure at 5:30 PM

3&4 out at 1:30 PM, measure at 6:30 PM

5&6 out at 2:30 PM, measure at 7:30 PM

7&8 out at 3:30 PM, measure at 8:30 PM

1. Make 2L of 0.9M KOH using CO2-free water: 10.10g / 2L. Mix it very very will with a stir bar, and pout into The dissolution of KOH is an exothermic reaction, so the vessel will just need to cool. It can go in the fridge.
2. Take the t0 measurement immediately (as soon as possible) and record value.
3. Add 5mL CO2-free water to each calibration curve jar
4. Add KOH traps to the standard curve jars and seal. (CO2 will be added later.)
5. Measure all jars. **Only ever have one jar open at a time.** To measure, open jar, pull out trap, measure on EC meter to 23.0°C (ideally). Immediately dump into corresponding, numbered, labelled tube with BaCl2. Cap tube. Jars may need a new 5mL of CO2-free DIW. Add this while the EC meter is measuring, dumping out any remaining water. Dispense 15mL of new KOH into a new vial, close jar, return to tray. Measure samples in random order. Do the blank as the 5th measurement of each tray (middle measurement). Ice water may be needed to rinse the probe between measurements, so it settles at 23.0°C.
6. Put tray back in incubation room once finished two. Each tray should be ~30 minutes.
7. Once enough tubes are collected (18), centrifuge them at 2500rpm for 5 minutes, and pour off excess. Do one rinse with CO2 free water, and then subsequent rinses can be regular DIW. Keep tally on sheet of number of rinses (need at least 3).
8. Inject CO2 to create new standard curve.
9. Rinse and then acid-wash KOH trap vials.
10. Measure previous day’s calibration curve at least 12 hours after setting it up.
11. Cap the dry BaCO3 after 24 hours of drying.