**ECS 4010 & EAS Clarity Software Guide**Written by Nick Smith with edits by Kelly Carroll

1. Check reagent age (insert tube, H2O trap, left/right tubes) and change any necessary reagents while in sta­­ndby mode.
2. Set Machine to work mode
3. Set your standby time (time it will wait before going into standby when idle)
   1. Press standby and put the time (15min)
4. Set machine to remote mode
5. Check flow rates using bubble flow meter & gauges
   1. He: 100 mL/min
   2. O2: 20-30 mL/min
   3. Sampler: 100 mL/min
   4. Air: 1 bar
6. Open EAS Clarity
7. Login as administrator
   1. Don’t worry about picking a project unless you have already started one
8. A screenshot of a computer

   Description automatically generatedOptional: open a new project
   1. File 🡪 Project 🡪 New
9. Set your method
   1. Click on “Ring” icon after mousing over the EA machine icon
   2. Describe method
      1. Method description: Carbon and Nitrogen
      2. GC column: Three meter HeySep Q, Mesh: 80-100
      3. Flow rate: Helium: 100 ml/min at 1.1 bar
      4. Detection: TCD
      5. Left Furnace temp: 980
      6. Right furnace temp: 650
      7. Oven: 65
      8. Note: Oxygen: 27 ml/min at 1 bar
   3. Enable Autostop
      1. 5.5 min run time
   4. Save method as
   5. A screen shot of a computer screen

      Description automatically generatedSet method
10. Open sample table (spreadsheet icon)
11. Put in sample information and weights
12. Uncheck “print”
13. Check “open” for samples you want to open in chromatogram window (e.g., all samples)
14. Check “open calibration” for ones you want to open in calibration window (e.g., standards and blanks)
    1. Enter 1-7 in the Lvl column beside your Standard samples
15. Save as new sample table in project folder
16. Check run boxes
17. Link calibration by clicking graph icon
    1. Nitrogen; Reten. Time = 2.2, L Window = 0.400, R Window = 0.400
       1. Set Curve Fit Type to Quadratic
    2. Carbon; Reten. Time = 3.5, L Window = 0.400, R Window = 0.400
       1. Set Curve Fit Type to Quadratic
    3. A computer monitor with blue pipes

       Description automatically generatedSet all other elements outside of the 5.5 Reten. Time, L Window, and R Window before deleting them
18. Check voltage (as long as your Data Acquisition Line is flat it doesn’t matter)
    1. ~2-5 mV
19. Check autosampler position and fill autosampler
    1. First sample will fall through
20. Begin run
    1. From sample table: Sample table 🡪 Run
21. Check that blanks are blank (VERY low N and C)
    1. Remove bad points if necessary
22. Check fit of standard curve
    1. Remove bad points if necessary
23. Let samples run
    1. Check QC throughout to ensure the %s of C/N are close (within 5%) of acetanilide/standard % amounts
24. When done, put machine into standby or shut down