API 4000 manual

1) Turn on Nitrogen
2) Open Analyst
    a. Ensure the quad icon is yellow (bottom right hand of the screen)
        i. Double Click on icon
            1. ensure vacuum is bellow 2
3) Click on the  (Reserve Instrument for Tuning)
    a. Turning on the system
    b. You should hear a clicking sound
    c. The quad icon will now turn green
        i. If not, you must unequip the system
            1. Double click on hardware setup
            2. Unequip the mass spec
            3. Wait 30 seconds
            4. Ensure vacuum is on, nitrogen is on, and the is not blinking on the instrument
            5. Reequip the system
            6. Check the quad icon again
4) Double click on manual tune
5) Run a Q1 scan
    a. Enter a Start (amu) mass value, Stop (amu) value, and Time (sec) of one scan cycle (such as:0.6).
    b. Select suitable Polarity. (Positive or Negative)
    c. Set Duration Time (min) to 1 or 5
    d. In the Source Gas tab, set CUR to 25, IS to 5500, TEM to 200, GC1 to 20, and GS2 to 10
    e. In the Detector tab, use default value for now
    f. In the Resolution tab, do not change Ion Energy. Select Unit Resolution
    g. In the Compound tab, set the DP to 65, use default for other settings now
    h. Click Start to monitor the MS spectra
    i. Click Stop to stop monitoring the MS spectra
    j. Click Acquire to store the MS spectra data in a file. You can open the file in the future
        i. Ensure you are in the correct file/folder before saving
6) Product Ion Scan (MS2)
    a. In Scan Type, select Product Ion Scan
    b. In the Products of filed, enter one of the precursor ions observed in the Q1 scan above.
    c. Enter a Start (amu) mass value of 40, Stop (amu) value of 10 mass units above the selected
    d. precursor/parent ion and Time (sec) of one scan cycle (such as:3)
    e. Select suitable Polarity. (Positive or Negative)
    f. Set Duration Time (min) to 1 or 5
    g. In the Source Gas tab, set CUR to 25, IS to 5500, TEM to 200, GC1 to 20, GS2 to 10, set CAD gas to 4 and use default for other settings now
    h. In the Detector tab, use default value for now

i. In the Resolution tab, do not change Ion Energy. Select Q1 Resolution=Low, Q1 Resolution=Unit
j. In the Compound tab, set the DP to 65, set CE as 20, use default for other settings now
k. Click Start to monitor the MS/MS spectra
    i. After scanning has started, Increase the CE 5v at a time until 80v and observe how fragmentation patter shifts from high mass fragments to low mass fragments. The spectrum displayed will correlate to the CE entered. Choose a suitable CE for your compound.
l. Click Stop
m. Click Acquire to store the MS/MS spectra data in a file. You can open the file in the future
n. Click Stop to finish before duration time is reached

7) Do not save methods

8) Retrieving Data
    a. Double click on open file data
    b. Open the appropriate folder and file
    c. Right click and drag over the appropriate section of the TIC
        i. Showing the MS spectra
    d. Right click on the MS spectra and save to spectra to USB
    e. To get rid of a section on the data file click on the X on the top of the screen
    f. Open more files as needed
9) Put system in standby mode
    a. Open manual tune
    b. Click on file
        i. Click on view sample queue
    c. Click on the sideway hourglass and place into standby mode
10) Turn off Nitrogen