Atomic Absorption

1. Turn on instrument – switch is located on the bottom right-hand corner of the machine
2. Double click the WizAArd icon – the “WizAArd Login” dialog box will appear
3. Enter Admin in the Login ID box  DO NOT enter a password

Element Selection Calibration Curve and Sample Set Up

4. The Wizard Selection box then appears, double click on the Element Selection icon
5. Click on the Select Elements button and the Load Parameters page will appear
   a. First select element
   b. Select Flame Continuous
   c. Select Normal Lamp unless SR Lamp is used as background correction
   d. Once settings are finished click OK then click Yes
6. The Edit Parameters page appears again with message about lamp setup  click OK
7. The Optics Parameters tab should be displayed click Lamp Pos Setup button
8. Choose the appropriate element, then click Next
9. The Preparation Parameters page is then displayed – both calibration curve settings and sample group settings can be entered here
10. On the Calibration Curve Setup page choose the Order – 1<sup>st</sup> = linear 2<sup>nd</sup> or 3<sup>rd</sup> = curved
11. Zero Intercept forces the curve to pass through the origin
12. Concentration Unit allows you to set the correct measurement for the samples
13. Repeat Conditions allows you to set the number of measurements for the same sample, once chosen, click OK
14. Blank Preparation Parameters allows you to set up a blank in between samples at a fixed interval
   a. Choose Auto
   b. Enter a value in the Frequency field
15. In Measurement Sequence for Calibration Curve enter number of standard samples and concentrations, click Update
16. Click on Sample Group Setup button of Preparation Parameters page – begin with 1
17. Enter Weight Correction Factors (needed to calculate actual concentration) see 4-14 in instruction manual
   a. Weight Factor WF – actual weight of sample
   b. Volume Factor VF – final volume of sample
   c. Dilution Factor DF – use if sample concentration is expected to exceed highest standard
   d. Correction Factor CF – use if conversion of units of measure are to be converted otherwise use 1
18. **Collective Setup** on the **Sample Group Setup** page allows you to enter the number of unknown samples

19. To enter **Sample ID** click on the **Create Sample ID** field

**Connect to Instrument/Send Parameters**

20. Choose **Connect to Instrument/Send Parameters** tab and click on button with same name when asked to connect, click **Yes**

21. **Initialize** screen is then displayed and parameters are automatically sent – let the machine run through the entire checklist
   a. When messages are displayed prompting checking of the safety devices if no action is necessary click **No** to proceed
   b. Click **OK** to close Initialize screen

22. After closing Initialize screen, message is displayed asking whether flame measurement is performed, click **Yes**

23. On **Instrument Check List for Flame Analysis** check all boxes displayed click **OK**

24. Choose the **Optics Parameters** page to set parameters for monochromatic and lamps. Standard parameters are populated automatically

25. Click **Next** and you will be prompted to do a **Line Search** (**Line Search/Beam Balance** page appears) if **Ok** appears beside both then they have been performed successfully

26. Click **Close** to go back to **Optics Parameter** page once all settings have been finished, click **Next** to go to **Atomizer/Gas Flow Rate Setup** page

27. To set parameters, ignite the flame and allow a standard to be aspirated, set the parameters so the absorbance of the standard sample falls within the intended range of absorbance

28. Choose **Burner Position Auto** button to obtain optimum condition for burner height through measurement of sample

29. Choose **Gas Flow Auto** button to obtain optimum condition for flow rate of fuel

30. One settings have been set click **Finish** button and the main screen is displayed
   a. It is possible to set these conditions as a template see **4.3 Saving the Template** in the instruction manual

Begin creating standard curves and analyzing samples at this point