

## 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. **Concen 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**