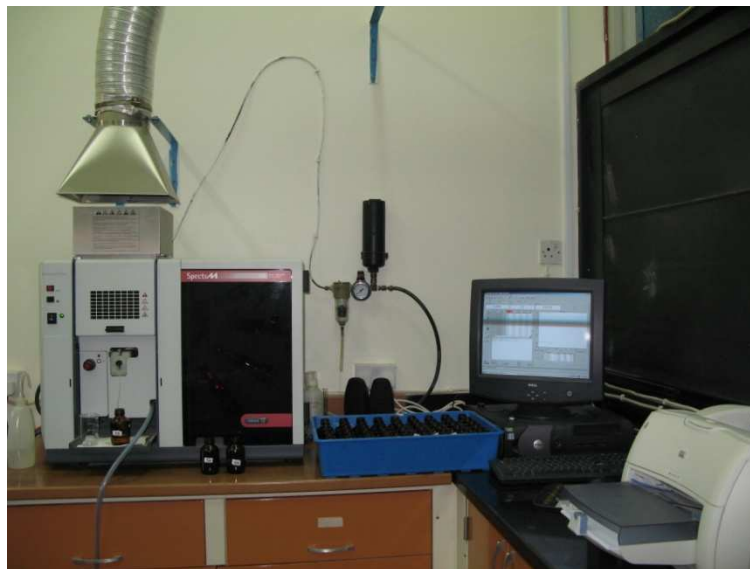




AA220FS ATOMIC ABSORPTION SPECTROPHOTOMETER

- 1- Switch on the AAS, this is to stabilize the machine and avoid fluctuations in the readings.
- 2- Double click on the device icon on a computer screen(Spectro AA)
- 3- Click on (Work Sheet)
- 4- Click on (new) to load anew worksheet [Notes: (new from : To load anew worksheet using an existing worksheet as a template) (Open : To load an existing worksheet)]
- 5- To load anew worksheet:
 - a- Select a file name.
 - b- Select the analyst.
 - c- Select the number of samples to be analyzed.
 - d- Click Ok
- 6- Click on (Add methods) :
 - a- Click on (Flame)
 - b- Select an element or elements to be measured(up to 4 elements)
 - c- Click Ok
- 7- Click on (Edit methods):
 - A- (Type/mode):
 - 1- Select (Manual) and (Absorbance)
 - 2- Click Next
 - B-(Measurement) :
 - 1- Select (PROMT), (Concentration) and (Times : measurement (10.0) Read Delay (10)
 - 2- Click Next
 - C- (Optical) :
 - 1- Select the (Lamp position :There are four places for the lamps and for each place there is a number) ,(Lamp Current mA , the number is written on the lamp), (Wave length nm),(Slit width nm) and (Back ground correction (BC off)
 - 2- Click Next,
 - D- (Standard) :
 - 1- Select (The number of the standard solution which already prepared), (Upper Valid Concentration) and (Conc. Decimal Places)

- 2- Click Next
- E- (Calibration) :
 - 1- Select (Calb. Algorithm - Linear), (Recalibration Rate: depend on the samples number), (Reslope Rate) and (Reslope Std. No.)
 - 2- Click Next
- F- (Cookbook)
 - 1- Select Notes
 - 2- Click Next
- G- Click Ok and Save.
- 8- Click on (Labels): Write the number of samples and for change the number use (Auto Copy) and (Total Rows).
- 9- Adjust the burner and Flame on:
 - 1- Fixed (Air – Acetylene) burner
 - 2- Clean the burner with (Burner cleaning and alignment card)
 - 3- Adjust the height and the direction of the burner by use (Burner cleaning and alignment card), make the light beam in the center of (Target area)
 - 4- Fill the (liquid trap) with distilled water
 - 5- Switch on exhaust fan
 - 6- Open Acetylene gas cylinder on (13-15 psi)
 - 7- Switch on Air compressor on (50-60 psi)
 - 8- Press the (Flame on button) and keep it pressed until the flame ignites, if the ignition sequence time out before the flame ignites, release the button ,wait about five second ,and restart the sequence
 - 9- The flame should be blue and liner otherwise press (Optimize) and adjust the Gas flow by change the number of (Acetylene gas flow) and (Oxidant gas flow) .
- Notes: Eye damage. Never directly view the flame, the hollow cathode and deuterium lamps as potentially hazardous radiation is emitted from these sources. The air - acetylene flame operate at extremely high temperature, if removing a burner head allow sufficient time for the burner head to cool. People at risk when using atomic absorption spectrophotometers. Students, academic and technical staff.
- 10- Analysis:
 - a- Press Start
 - b-(Prepare for instrument zero) press Ok
 - c- (Present solution CAL ZERO) aspirate distilled water and press Read or Ok
 - d- Aspirate Standard solution ,
 - e- Aspirate unknown samples for reading (Press Read),
 - f- After finishing from all the reading (Save the result),
 - g- Press (Report) and chose (Print report) or (Write to Text File).
- 11- Shutting down the System:
 - a- Exit the Spectro AA software
 - b- Turn off the instrument by press (Flame off button)
 - c- Shutoff gas supplies at the regulator and gas cylinder
 - d- Shutoff the Air compressor
 - e- Turn off the exhaust Fan.