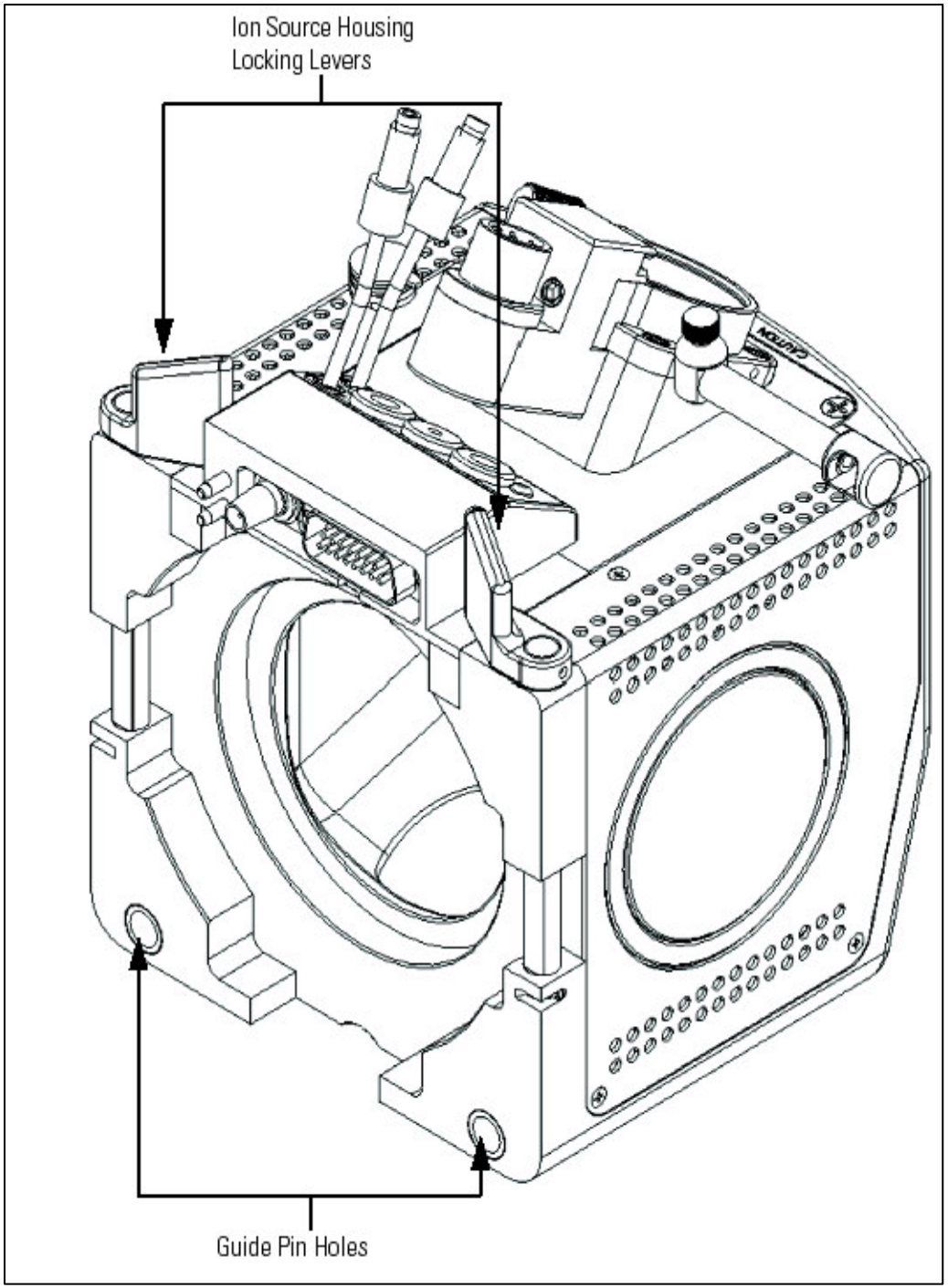
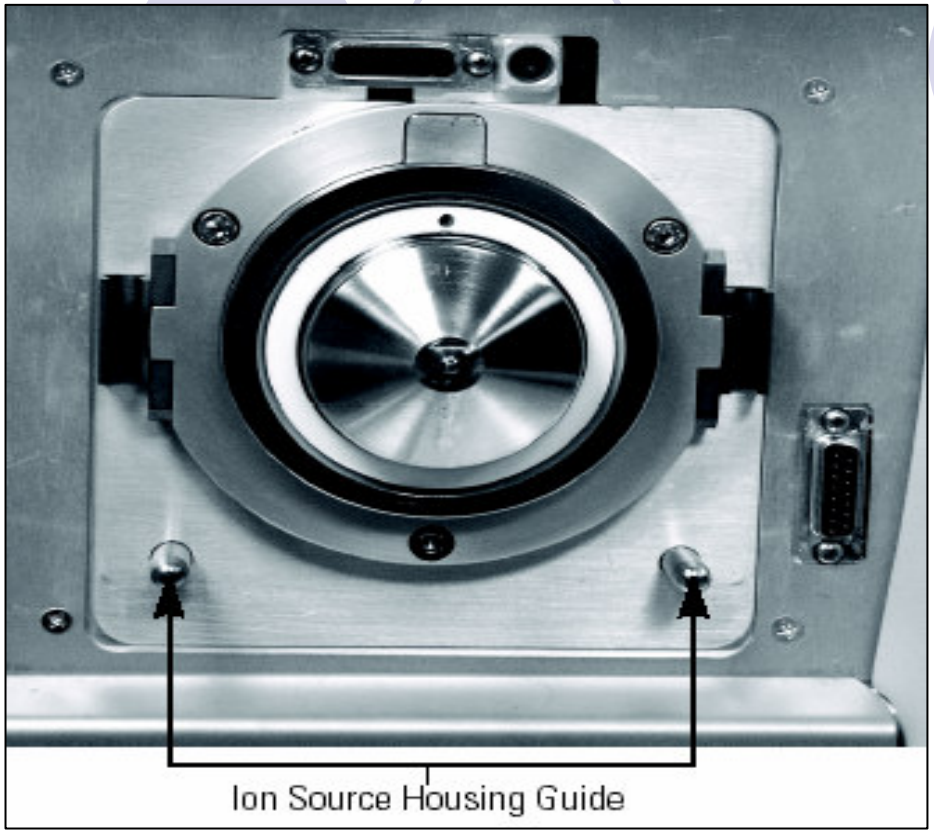
LCQ FLEET

Installing the Ion Max-S Ion Source Housing

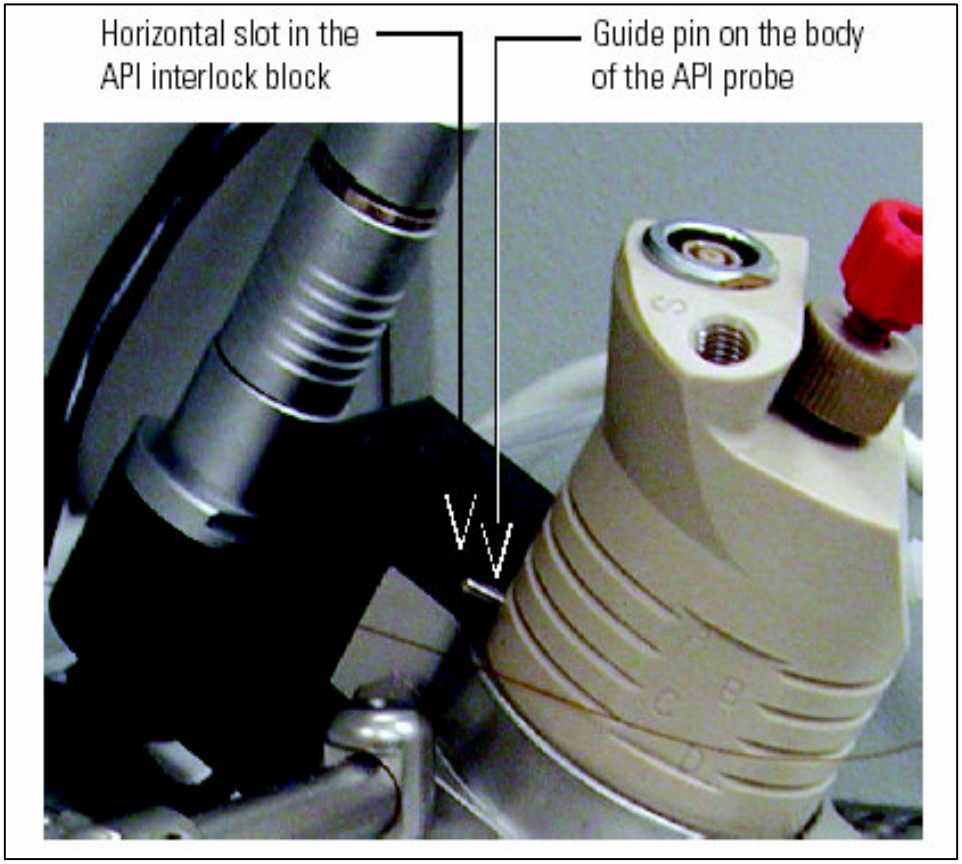
1. Align the two guide pin holes on the rear of the ion source housing with the ion source housing guide pins on the MS detector, and then carefully press the ion source housing onto the ion source mount.





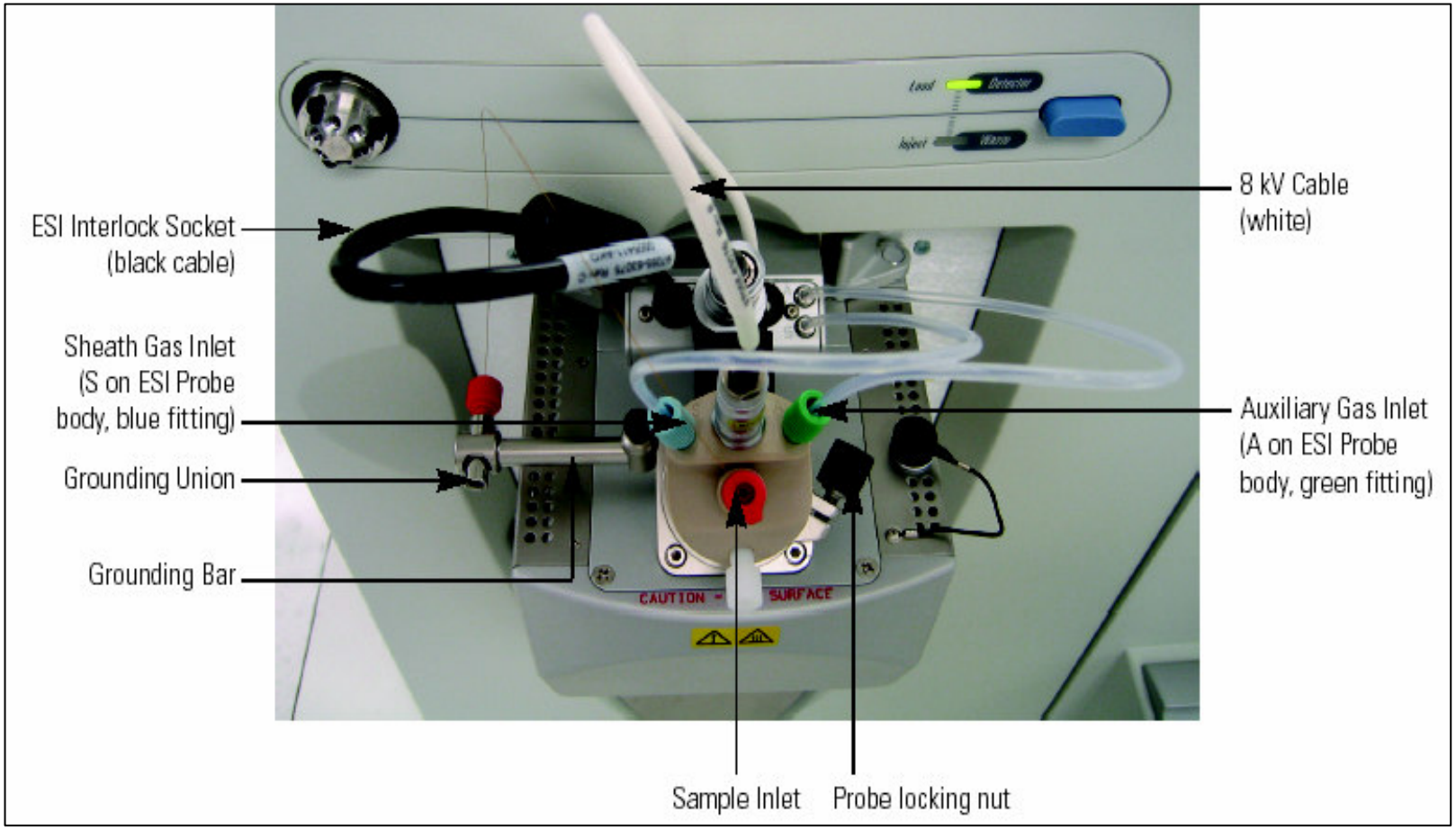
2. To lock the ion source housing onto the ion source mount assembly, rotate the ion source housing locking levers 90 degrees.

Installing the ESI Probe



1. Turn the probe 45 degrees clockwise and align the guide pin aligns with the vertical notch in the API interlock block; you might need to pull the probe towards you slightly to properly align the pin with the notch. Once you have turned the probe far enough to align the pin with the vertical alignment notch, slowly push the probe straight in until you feel resistance. Give the probe to the position between C and D and lock the probe in place, tighten the probe locking nut.

2. Insert the APCI vaporizer heater cable into the API interlock socket. Insert the stainless steel ZDV fitting (grounding union) into the grounding bar on the ion source housing.



3. Connect the sheath gas fitting (blue) to the sheath gas inlet (S) on the probe.

4. Connect the auxiliary gas fitting (green) to the auxiliary gas inlet (A) on the probe.

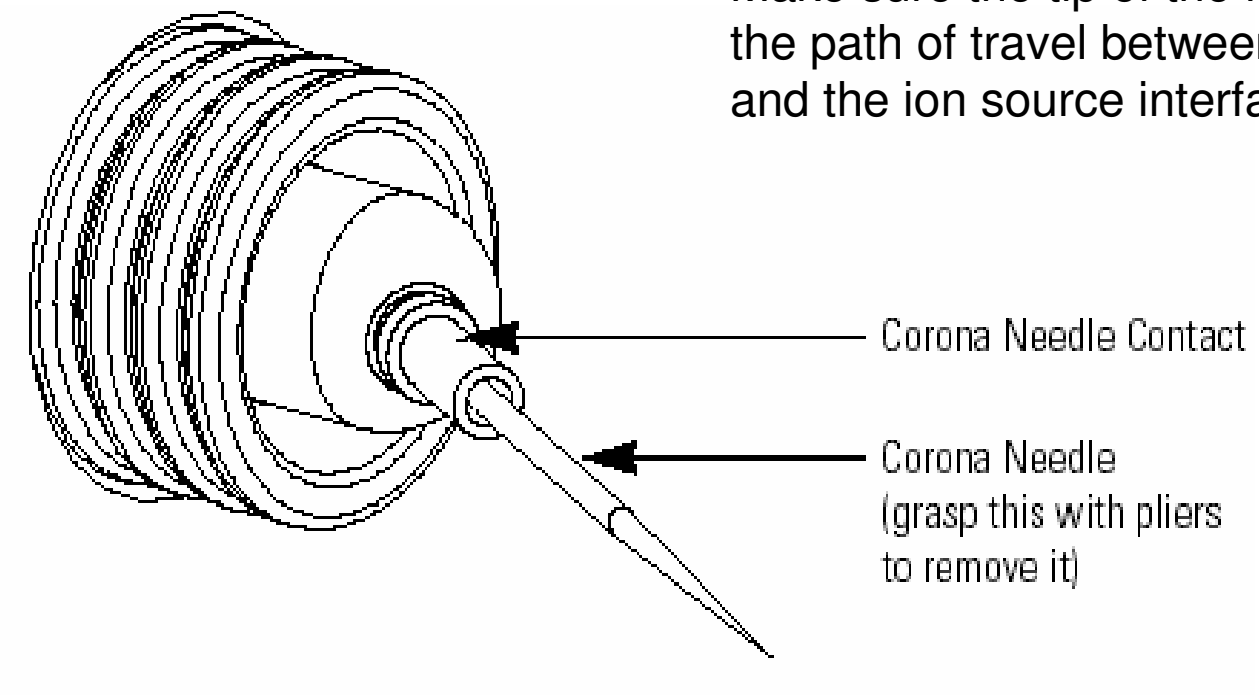
5. Connect the 8 kV cable to the ESI needle high voltage receptacle on the ESI probe. Tighten the locking ring on the 8 kV connector.

6. Connect the sample transfer tubing to the grounding union.

Setting Up the Ion Source with the APCI Probe

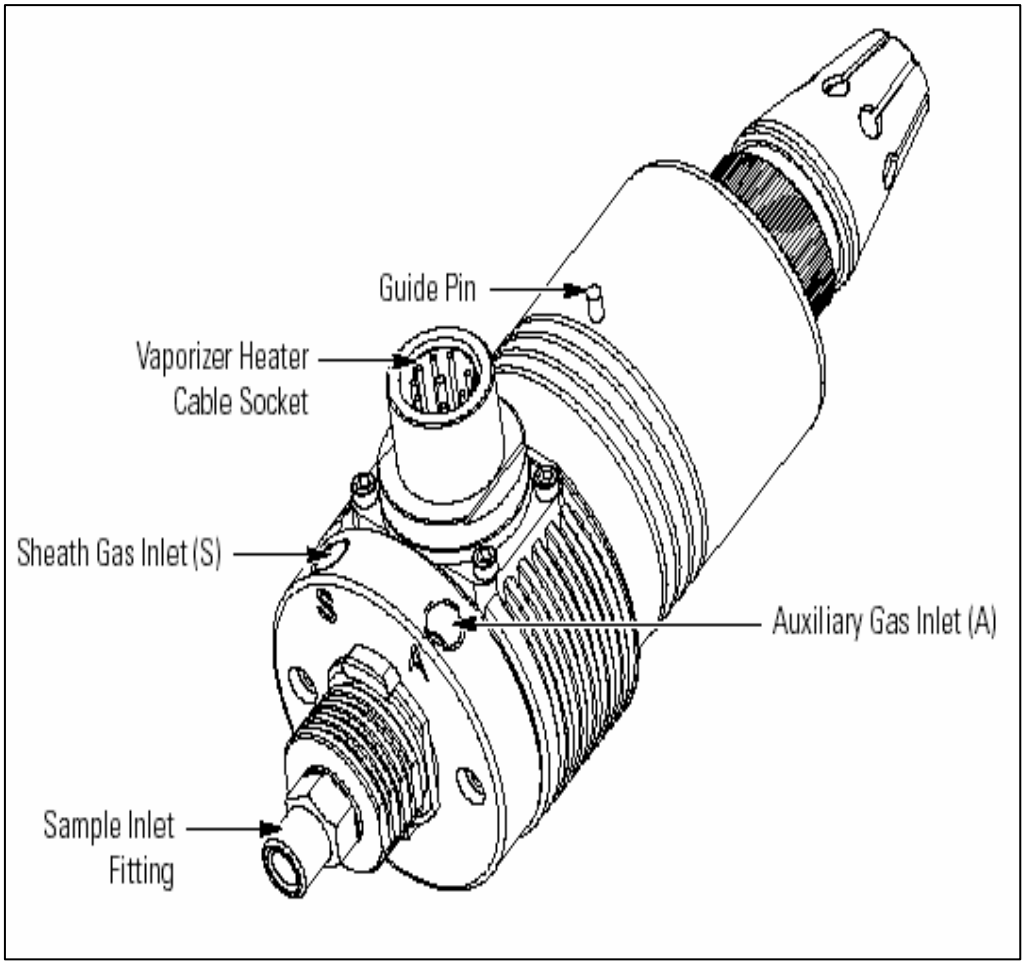
1. Installing the Corona Needle - Using pliers, grasp the needle by the corona needle contact and push the needle straight into the needle socket in the Ion Max ion source housing.

Make sure the tip of the needle is aligned with the path of travel between the APCI probe and the ion source interface on the instrument.



2. Installing the Ion Max Ion Source Housing

3. Installing the APCI Probe : Turn the probe 45 degrees clockwise and align the guide pin aligns with the vertical notch in the API interlock block; you might need to pull the probe towards you slightly to properly align the pin with the notch.



Once you have turned the probe far enough to align the pin with the vertical alignment notch, slowly push the probe straight in until you feel resistance. Give the probe to the position between C and D and lock the probe in place, tighten the probe locking nut.

3.To connect the 8 kV cable to the corona needle high voltage receptacle :

a. Plug the 8 kV cable into the corona needle high voltage receptacle on the right side of the top of the ion source housing.

b. Lock the cable by rotating the locking ring clockwise.

4. Insert the probe into the port until the guide pin meets with the probe collar on the ion source housing. Tighten the probe collar.

6. Unplug the vaporizer heater cable from the ESI interlock plug on the ion source housing.

7. Connect the vaporizer heater cable to the vaporizer heater cable socket on the APCI probe.

10. Connect the sheath gas fitting (blue) to the sheath gas inlet (S) on the probe.

11. Connect the auxiliary gas fitting (green) to the auxiliary gas inlet (A) on the probe.

12. Connect the sample transfer line to the APCI probe inlet.

Before measurement please pay attention :

- For mass spectrometer activation switch to OPERATE only then you can run the pump - sheath and aux gases have to be blowing.

- Sheath and aux gases have to be blowing before warming up VAPORIZER TEMPERATURE. The VAPORIZER TEMPERATURE have to be cooled down (under 50ºC) before setting the mass spectrometer to STANDBY in case of APCI.

- Please be careful about the concentration of the sample, too high concentrations of your samples can contaminate the ion source.

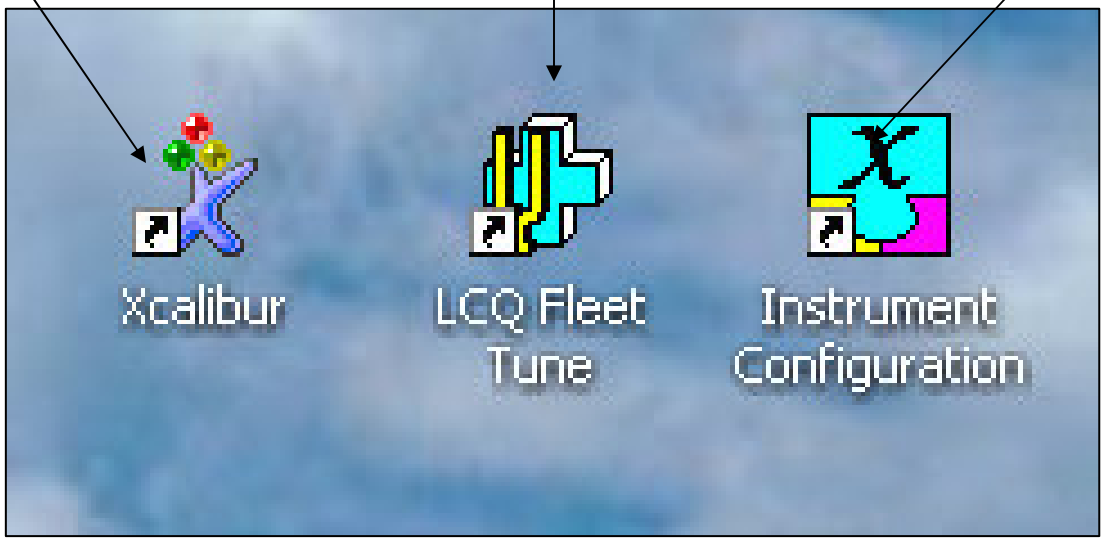
- The samples must be free of nonvolatile salts and surfactants and as well as solvents with high boiling points (DMSO, DMF).

Important icons on the desktop

Instruments control (MS, pump, auto-sampler)

The browser of your data, the instrument setup etc.

Configuration of the instruments (It is usually configured)



Start of the measurement

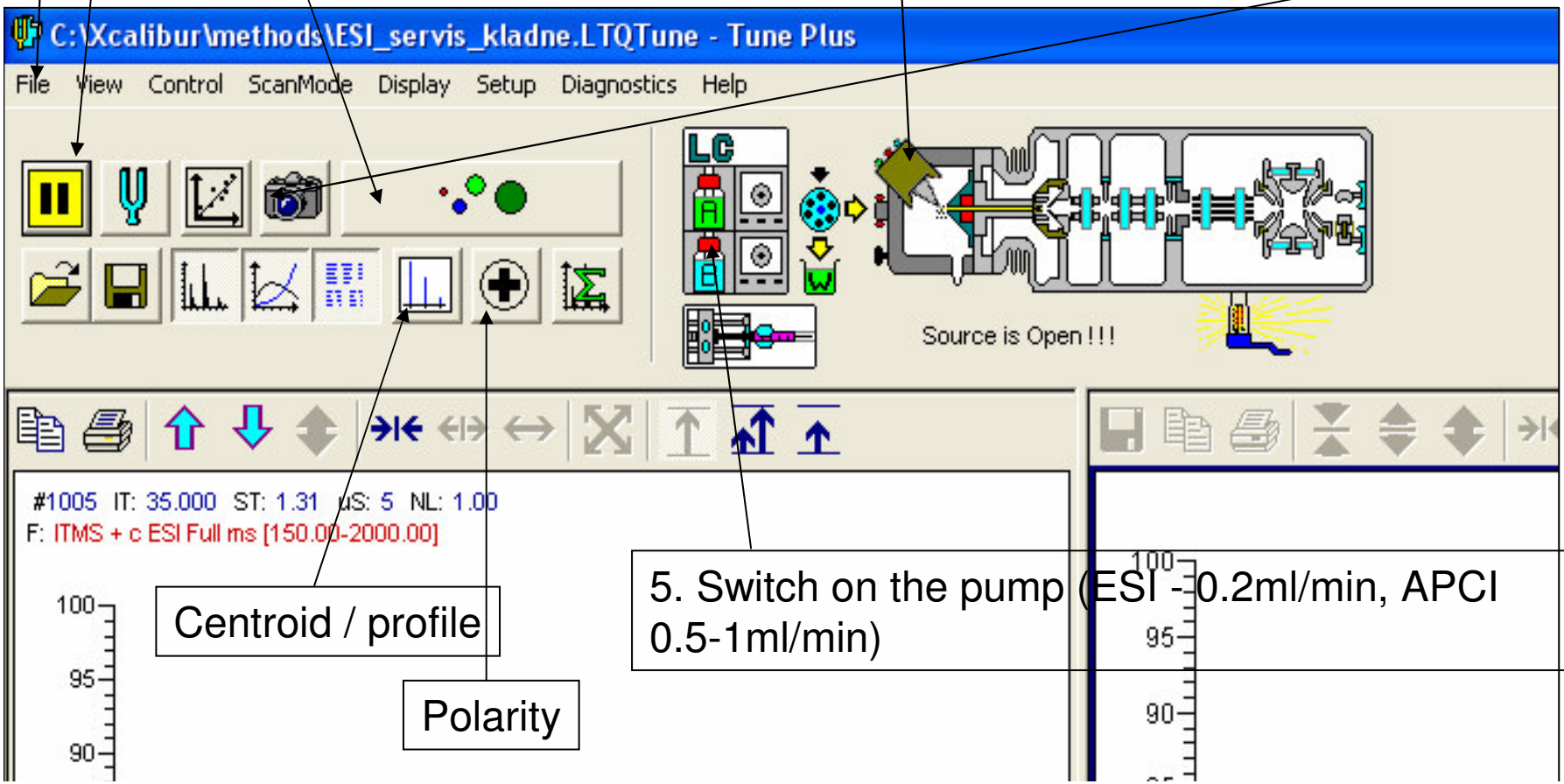
1. Load the appropriate method (either the gases have to be immediately on or vaporizer temperature have to be off in case of APCI)

2. Switch on the spectrometer

3. Check the source parameters: gases, capillary temperature, vaporizer temperature

4. Define scan - adjust an extent of scan ranges, scan rate etc.

Acquire data



Centroid / profile

Polarity

5. Switch on the pump (ESI - 0.2ml/min, APCI 0.5-1ml/min)

End of the measurement

1. Flush the sample loop

2. Switch off the pump

3. Cold down capillary temperature (200ºC) and vaporizer temperature (under 50ºC) in case of APCI

4. Set to STANDBY

5. Put the ion source housing down, wipe the cone and cover the entrance of the capillary with septum.