

Appendix A

Starting Up and Shutting Down the Instrument

A.1 Starting Up the Instrument

1. Switch on the power switch located on the lower-right side corner of the instrument's front panel (see Section 1.6.14).
2. Allow 3 minutes for the embedded PC to initialize. An audible alert is given when the PC is ready.
3. Start the MassLynx software. The MassLynx window appears and the word "Ready" appears in the status bar at the bottom (see Figure A-1).
4. Click the Instrument shortcut bar MS Tune icon to open the Tune window (see Figure A-2).
5. Select Options > Pump.



Caution: *The instrument may be damaged if the parameters in the Tune window Diagnostics page are modified by an unqualified user; the parameters on this page should only be modified by a Waters field service engineer.*

6. Click the Diagnostics tab.

Note: *If the Diagnostics tab is not present, select Options > View Diagnostics Page.*

7. Monitor the Turbo Speeds. These should reach 98 to 100% within approximately 5 minutes of Options > Pump being selected.
8. Ensure that the instrument has pumped sufficiently such that the Vacuum LED on the front panel is steady green (see Section 1.5.5). The mass spectrometer is sufficiently evacuated to enable operation in 20 minutes.

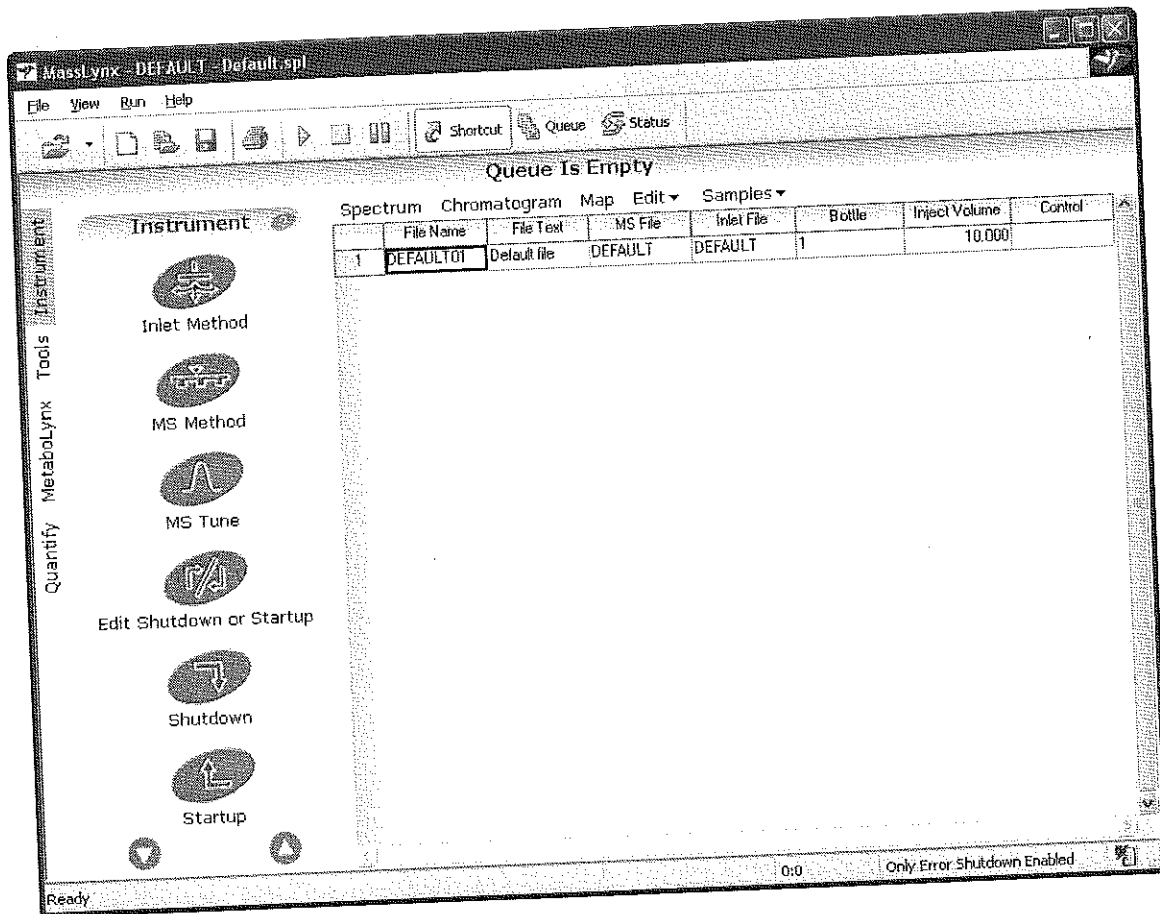


Figure A-1 MassLynx Window

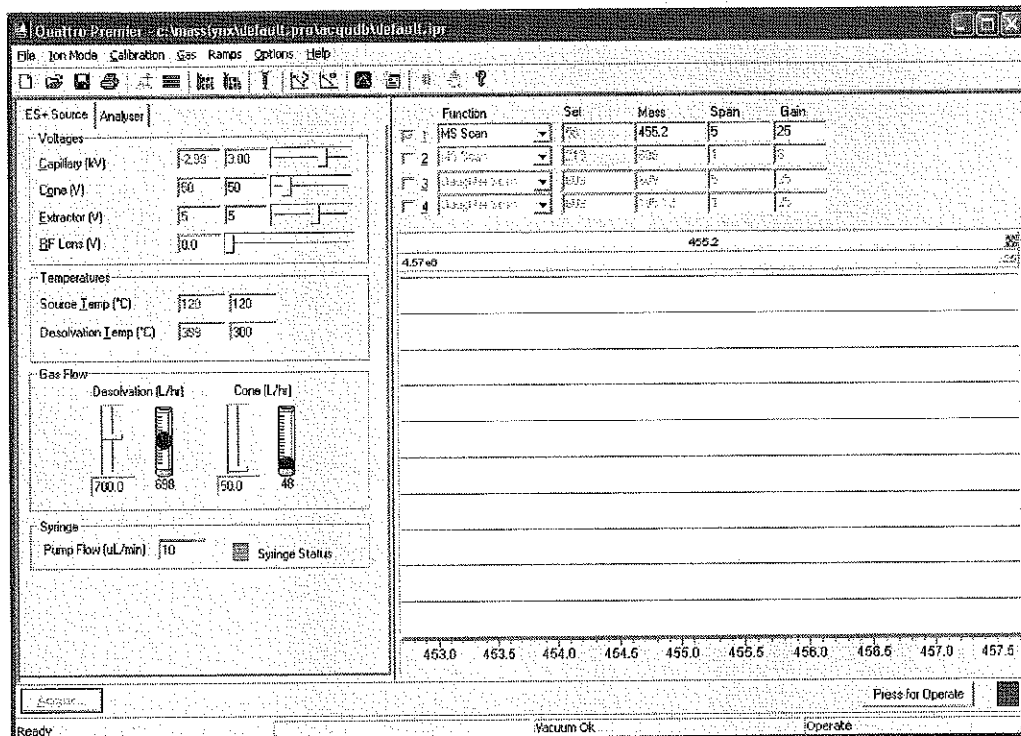


Figure A-2 Tune Window

A.2 Shutting Down the Instrument

A.2.1 Emergency Shutdown



Warning: The power switch does not isolate the instrument from the mains power supply. Unplug the mains power from the rear of the instrument to isolate the instrument from the mains power supply.

If you must shut down the instrument in an emergency, switch off the power at the wall mounted isolation switch(es), if fitted. If not, switch off the power switch located on the lower-right side corner of the instrument front panel (see Section 1.5.1), and turn off all peripherals.

Note: Data may be lost.

A.2.2 Overnight Instrument Shutdown

When the instrument is to be left unattended for a long time, for example, overnight or at weekends, proceed as follows:

1. On the MassLynx Tune window Source page, set the Voltages, Temperatures, Gas Flow, and Syringe parameters to zero.
2. If required, click Press for Standby to switch the instrument out of Operate.

Note: It is not necessary to switch the instrument out of Operate. However, this is acceptable provided that the instrument warm-up time is considered when restarting analysis.

A.2.3 Complete Instrument Shutdown

1. In the Tune window, click Press for Standby.
2. Select Options > Vacuum.
3. Select Vent Instrument.

A message confirms the vent command.

4. Click OK. The turbomolecular pumps are switched off. When the turbomolecular pumps have run down to half their normal operating speed, the vent valves are opened and the instrument is automatically vented. The Vacuum LED will switch off after changing from green to amber.
5. Exit MassLynx.

6. Shut down the PC.
7. Switch off all peripherals.
8. Switch off the power switch located on the lower-right side corner of the instrument front panel (see Section 1.5.1).

Note: *The power switch does not isolate the instrument; fans may be heard running, even when the instrument is "off".*