Error Reporting and Troubleshooting

When an issue occurs, the software logs error reports and warnings that appear on the screen. You can see precisely where an issue has occurred by selecting Event Log from the View menu. The icon to the left of the sample or batch where the problem occurred turns yellow for a warning or red for an error.

The Analyst service is started each time you launch the Analyst® software. In general, however, the Analyst Service starts automatically when you log on to Windows. If for any reason the service is not running when you try to start the Analyst software, perhaps there was an issue starting the service at the time of log on, or if it was manually stopped, the Analyst Service will start up at that time. For this reason, starting or restarting the Analyst Service is almost always done automatically.

Topics in this section:

- Filtering the Event Log
- Saving Event Logs
- Stopping the Analyst Service
- Starting the Analyst Service
- Troubleshooting Hardware Profiles

Filtering the Event Log

The system log contains reports of system events including errors, warnings, and other messages. Use the Windows Event Viewer to display information that may be helpful in troubleshooting and performing system diagnostics. Before you can effectively use the information in the system log, you should filter the information to display only the items relevant to the software.

1. **From the Analyst® software menu, click View > Event Log.**
2. **In the Event Viewer (Local) window, double-click Application.**
3. **From the Event Viewer menu, click View > Filter.**
4. **On the Filter tab, in the Event source field, select Analyst.**
5. **If required, select a Category and then click OK.**

   The Event Viewer now displays only the filtered Analyst software events.
6. **Double-click an event to view the log.**

Saving Event Logs

The errors logged by the Windows program Dr Watson may help you understand the information in the system logs. For more information about Dr Watson and the DRWTSN32.log, see the Windows Help.

1. **From the Analyst® software menu, click View > Event Log.**
2. **In the Event Viewer (Local) window, double-click Application.**
3. **From the Event Viewer menu, click View > Filter.**
4. **On the Filter tab, in the Event source field, select Analyst.**
5. **If required, select a Category and then click OK.**

   The Event Viewer now displays only the filtered Analyst software events.
6. **Click Action > Save Log File As.**
7. **Enter a file name and file type and then click Save.**

Stopping the Analyst Service

Stop the Analyst Service if there are issues communicating with the instrument or if there are communication issues between the mass spectrometer and the peripheral devices.

1. **In Control Panel, open the Administrative Tools.**
2. **Double-click Services and then click Analyst Service.**
3. **Right-click and then click Stop.**

Starting the Analyst Service

The Analyst Service is the communication path between the mass spectrometer and attached peripheral devices.

1. **In Control Panel, open the Administrative Tools.**
2. **Double-click Services and then click Analyst Service.**
3. **Right-click and then click Start.**

Troubleshooting Hardware Profiles

If a hardware profile fails to become active, a dialog appears indicating which device in the profile failed. A failed profile may be due to communications errors. Attempt the following to activate the profile:

- **Verify that the device is powered on.**
- **Verify that the communication settings with the device (that is, dip switch settings, and so forth.) are set correctly and match the settings in the Communication tab. Note that on computers with two built-in serial ports, the first port on the serial port expansion card is usually COM3, even though the cable indicates P1.**
- **Cycle the power to the device by turning it off, waiting 10 seconds, and then turning it back on. Wait until all device power-up activities are complete before attempting to activate the profile again. Some devices may require 30 seconds or more to complete their power on activities.**
- **If the issue persists, delete the failing profile and create a new one.**

Troubleshooting System Issues

Problem	Possible cause	Corrective action
Sensitivity loss	Instrument requires tuning and optimizing	• *Getting Started Guide* or System User Guides • Analyst® software Help system
	Dirty curtain plate	Clean the curtain plate. Refer to *Cleaning the Vacuum Interface* in the appropriate Qualified Maintenance Person Guide or System User Guide for your mass spectrometer.
	Dirty orifice plate	Clean the orifice plate. Refer to *Cleaning the Vacuum Interface* in the appropriate Qualified Maintenance Person Guide or System User Guide for your mass spectrometer.
	Dirty QJet® ion guide	Clean the QJet ion guide. Refer to *Cleaning the Vacuum Interface* in the appropriate Qualified Maintenance Person Guide for your mass spectrometer.
Frequent or extreme contamination of the QJet ion guide	Curtain Gas™ flow rate is too low.	Verify, and if applicable, increase the Curtain Gas flow rate.
Low vacuum pressure	Low roughing pump oil level.	Check the roughing pump oil level, and add oil if necessary. Refer to *Replacing the Pump Oil* in the appropriate Qualified Maintenance Person Guide for your mass spectrometer.

Troubleshooting Turbo V Ion Source Issues

Problem	Possible cause	Corrective action
The Analyst® software reports that the mass spectrometer is in Fault status	• The probe is not installed. • The probe is not connected securely.	• Install the probe. Refer to *Install the Probe* in the *Turbo V™ Ion Source Operator Guide*. • Remove and replace the probe. Tighten the probe connection bronze ring securely. Refer to *Remove the Probe* and *install the probe* in the *Turbo V™ Ion Source Operator Guide*.
The Analyst software indicates that the APCI probe is in use, but the TurboIonSpray® probe is installed.	F3 fuse is blown.	Contact the FSE.
The spray is not uniform.	The electrode is blocked.	Clean or replace the electrode. Refer to *Clean or Replace the Electrode Tube* in the *Turbo V™ Ion Source Operator Guide*.
Sensitivity is poor.	Solvent vapor or other unknown compounds are present in the analyzer region.	Optimize the Curtain Gas™ flow. Refer to *Optimize the TurboIonSpray Probe* or *Optimize the APCI Probe* in the *Turbo V™ Ion Source Operator Guide*.
During testing, the ion source fails to meet specifications.	• The mass spectrometer has not passed the installation tests. • The test solution was not prepared correctly.	• Perform installation tests on the mass spectrometer with the default source. • Confirm that the test solutions were prepared correctly. • If the problem cannot be resolved, contact the FSE.
Background noise is high.	• Temperature (TEM) is too high. • Heater gas flow rate (GS2) is too	• Optimize the temperature. • Optimize heater gas flow.

	high.	
Arcing or sparks occur.	**The position of the corona discharge needle is incorrect.**	**Turn the corona discharge needle toward the curtain plate, and away from the stream of heater gas. Refer to *Adjust the Position of the Corona Discharge Needle* in the *Turbo V™ Ion Source Operator Guide*.**

Discharge in the SelexION Device

Electrical discharge is caused by excessive electric field in the SelexION® device ion mobility cell, leading to breakdown of the transport gas. This can occur anytime the E/N ratio (E is the electric field, or voltage/gap spacing, and N is the number density) exceeds a certain value. The onset for discharge can also change with different transport gas conditions.

When a discharge is detected in the SelexION device ion mobility cell during sample acquisition, the Analyst® software aborts the sample acquisition and logs the error in the event log. If you click the aborted sample in the queue, an error message is displayed.

If a discharge is detected in the SelexION device ion mobility cell, to avoid repeating the discharge when using the same method, use lower Separation Voltage (SV) or DMS Temperature (DT) value in the acquisition method. If you notice discharges with SV and DT combinations that have worked in the past, then clean and align the SelexION device ion mobility cell electrodes. For more information, see the *Cleaning and Aligning the Ion Mobility Cell Electrodes* in the *SelexION Technology User Guide* available on the hardware documentation DVD.

When the fault is cleared, the instrument goes into the Standby mode.