SCIEX
The Power of Precision

Ion Source Tests, Specifications, and Data Log

For SCIEX OS

For SCIEX Triple Quad Systems

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IonDrive Turbo V Ion Source Tests 1

These tests apply to the IonDrive Turbo V ion source installed on a SCIEX 6500 or 6500+ system.

Run these tests in any of the following situations:

- When a new ion source is installed.
- After major maintenance to the ion source.
- Whenever the performance of the ion source must be assessed, either before starting a project or as part of a standard operating procedure.

WARNING! Ionizing Radiation Hazard, Biohazard, or Toxic Chemical Hazard. Do not use the ion source without knowledge of and training in the proper use, containment, and evacuation of toxic or injurious materials used with the ion source.

WARNING! Puncture Hazard, Ionizing Radiation Hazard, Biohazard, or Toxic Chemical Hazard. Discontinue use of the ion source if the ion source window is cracked or broken, and then contact a SCIEX Field Service Employee (FSE). Any toxic or injurious materials introduced in the equipment will be present in the source exhaust output. Exhaust from equipment should be vented from the room. Dispose of sharps following established laboratory safety procedures.

WARNING! Toxic Chemical Hazard. Wear personal protective equipment, including a laboratory coat, gloves, and safety glasses, to avoid skin or eye exposure.

WARNING! Ionizing Radiation Hazard, Biohazard, or Toxic Chemical Hazard. In the event of a chemical spill, review product safety data sheets for specific instructions. Make sure that the system is in Standby state before cleaning a spill near the ion source. Use appropriate personal protective equipment and absorbent wipes to contain the spill and dispose of it following local regulations.

Required Materials
• Mobile phase solvent: 70:30 acetonitrile:water solution • Test Solution: 0.0167 pmol/µL (equivalent to 10 pg/µL) reserpine. Use the pre-diluted 0.0167 pmol/µL reserpine solution included in the SCIEX Standard Chemical Kit (PN 4406127). • HPLC pump (for mobile phase) • Manual injector (8125 Rheodyne or equivalent) with a 5 µL loop or an autosampler set up for 5 µL injections • PEEK tubing 1/16-inch outer diameter (o.d.), 0.005-inch inner diameter (i.d.) • Ion source with a probe installed • Syringe: 250 µL to 1000 µL • Powder-free gloves, nitrile or neoprene recommended • Safety glasses • Lab coat

Note: All test solutions must be kept refrigerated. If they are left out of the refrigerator for longer than 48 hours, then discard them and use new solutions.

Prepare for the Test

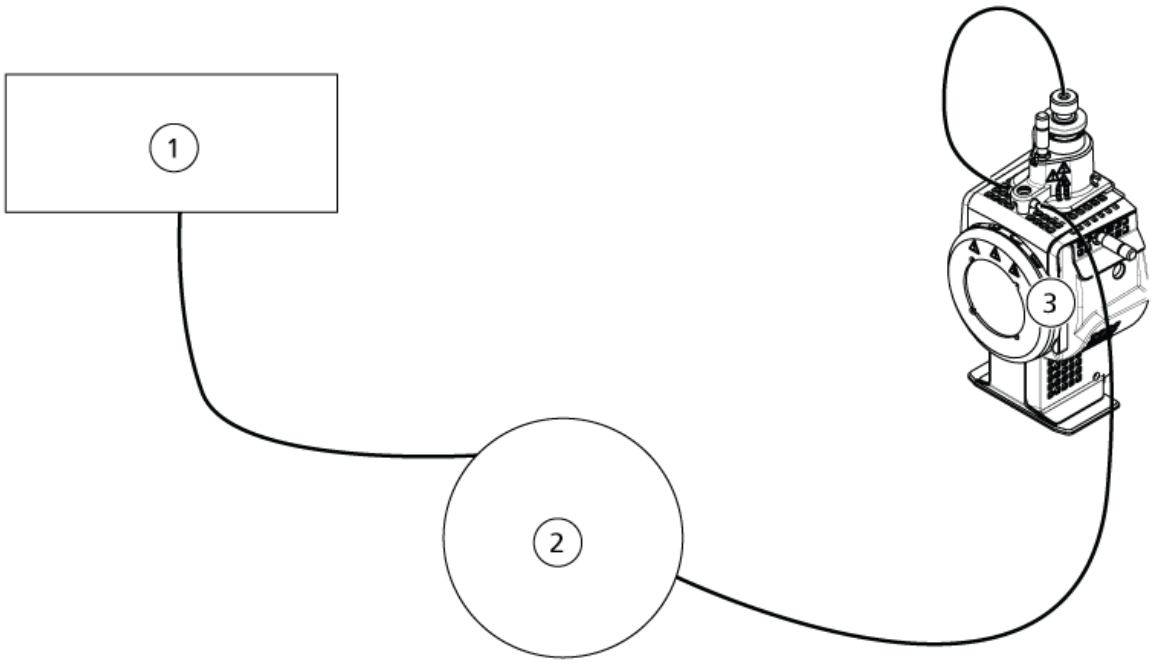
WARNING! Electrical Shock Hazard. Avoid contact with the high voltages applied to the ion source during operation. Put the system in Standby state before adjusting the sample tubing or other equipment near the ion source.

- When installing a new ion source, make sure that the mass spectrometer is performing to specifications with the existing ion source.
- Install the ion source on the mass spectrometer.
- Make sure that the ion source is fully optimized. Refer to the document: *Operator Guide* for the ion source.
- Refer to all applicable safety data sheets for any necessary precautions before handling chemical solutions or solvents.
- Make sure that the users are sufficiently trained on mass spectrometer operation and safety procedures.
- Install the probe to be tested.

- Connect the grounding union on the ion source to a pump, through a manual injector equipped with a 5 µL loop, or to an autosampler.

Refer to the figure: Figure 1-1.

Figure 1-1 LC Pump Configuration



Item	Description
1	Pump for the flow inlet
2	Injector or autosampler
3	Ion source

Test the TurboIonSpray Probe

CAUTION: Potential System Damage. Do not introduce any solvent flow until after the ion source has reached the correct temperature.

For information about installing or optimizing the ion source, refer to the document: *Operator Guide* for the ion source.

1. Configure the HPLC pump to deliver 0.5 mL/min of the mobile phase.

2. In SCIEX OS open a previously optimized method or set new method parameters as shown in the following table.

Table 1-1 Method Parameters

Parameter	Value
MS Parameters	
Experiment	MRM
Q1 mass	609.3
Q3 mass	195.1
Method duration (min)	10
Source/Gas Parameters	
Ion source gas 1	60 (or as optimized)
Ion source gas 2	70 (or as optimized)
Curtain gas	30 (or as optimized)
Source temperature	700 (or as optimized)
Spray voltage	4500 (or as optimized)
Compound Parameters	
DP (V)	100 (or as optimized)
CE (V)	45 (or as optimized)
CXP (V)	As optimized

3. Click **Start** to run the method.

WARNING! Ionizing Radiation Hazard, Biohazard, or Toxic Chemical Hazard. Make sure that the electrode protrudes beyond the tip of the probe, to prevent hazardous vapors from escaping from the source. The electrode must not be recessed within the probe.

CAUTION: Potential System Damage. Optimize using the highest possible flow rate for the gas for the Curtain Gas Interface to avoid contaminating the mass spectrometer.

4. Click **Acquire** to begin collecting data.
5. Perform three 5 µL injections of the reserpine solution.

Tip! We recommend that the 5 µL loop be overfilled with 30 µL to 40 µL of the solution.

6. Print the results.
7. Average the three intensities of the ions and then record the result in the Data Log.
8. Confirm that the average intensity is acceptable. Refer to the section: Data Log: IonDrive Turbo V Ion Source.
   If the result is not acceptable, refer to the section: Troubleshooting Tips.
9. After completing the tests, stop the LC pump, set **Source temperature** to 0, and then let the probe cool.

Test the APCI Probe

CAUTION: Potential System Damage. Do not introduce any solvent flow until after the ion source has reached the correct temperature.

For information about installing or optimizing the ion source, refer to the document: *Operator Guide* for the ion source.

1. Configure the HPLC pump to deliver 1 mL/min of the mobile phase.
2. In SCIEX OS open a previously optimized method or set new method parameters as shown in the following table.

Table 1-2 Method Parameters

Parameter	Value
MS Parameters	
Experiment	MRM
Q1 mass	609.3
Q3 mass	195.1
Method duration (min)	10
Source/Gas Parameters	
Ion source gas 1	60 (or as optimized)
Ion source gas 2	70 (or as optimized)
Curtain gas	30 (or as optimized)
Source temperature	700 (or as optimized)
Spray voltage	4500 (or as optimized)

Table 1-2 Method Parameters (continued)

Parameter	Value
Compound Parameters	
DP (V)	100 (or as optimized)
CE (V)	45 (or as optimized)
CXP (V)	As optimized

3. Click **Start** to run the method.

WARNING! Ionizing Radiation Hazard, Biohazard, or Toxic Chemical Hazard. Make sure that the electrode protrudes beyond the tip of the probe, to prevent hazardous vapors from escaping from the source. The electrode must not be recessed within the probe.

CAUTION: Potential System Damage. Optimize using the highest possible flow rate for the gas for the Curtain Gas Interface to avoid contaminating the mass spectrometer.

4. Click **Acquire** to begin collecting data.
5. Perform three 5 µL injections of the reserpine solution.

Tip! We recommend that the 5 µL loop be overfilled with 30 µL to 40 µL of the solution.

6. Print the results.
7. Average the three intensities of the ions and then record the result in the Data Log.
8. Confirm that the average intensity is acceptable. Refer to the section: Data Log: IonDrive Turbo V Ion Source.
   If the result is not acceptable, refer to the section: Troubleshooting Tips.
9. After completing the tests, stop the LC pump, set **Source temperature** to 0, and then let the probe cool.

Turbo V Ion Source Tests 2

Run these tests in any of the following situations:

- When a new ion source is installed.
- After major maintenance to the ion source.
- Whenever the performance of the ion source must be assessed, either before starting a project or as part of a standard operating procedure.

WARNING! Ionizing Radiation Hazard, Biohazard, or Toxic Chemical Hazard. Do not use the ion source without knowledge of and training in the proper use, containment, and evacuation of toxic or injurious materials used with the ion source.

WARNING! Puncture Hazard, Ionizing Radiation Hazard, Biohazard, or Toxic Chemical Hazard. Discontinue use of the ion source if the ion source window is cracked or broken, and then contact a SCIEX Field Service Employee (FSE). Any toxic or injurious materials introduced in the equipment will be present in the source exhaust output. Exhaust from equipment should be vented from the room. Dispose of sharps following established laboratory safety procedures.

WARNING! Toxic Chemical Hazard. Wear personal protective equipment, including a laboratory coat, gloves, and safety glasses, to avoid skin or eye exposure.

WARNING! Ionizing Radiation Hazard, Biohazard, or Toxic Chemical Hazard. In the event of a chemical spill, review product safety data sheets for specific instructions. Make sure that the system is in Standby state before cleaning a spill near the ion source. Use appropriate personal protective equipment and absorbent wipes to contain the spill and dispose of it following local regulations.

Required Materials

- Mobile phase solvent: 70:30 acetonitrile:water solution
- Test Solution:
  - For 4500, 5500, 5500+, 6500, and 6500+ systems, use the pre-diluted 0.0167 pmol/µL reserpine solution included in the SCIEX Standard Chemical Kit (PN 4406127).

  A vortex mixer is required.
- HPLC pump (for mobile phase)
- Manual injector (8125 Rheodyne or equivalent) with a 5 µL loop or an autosampler set up for 5 µL injections
- PEEK tubing 1/16-inch outer diameter (o.d.), 0.005-inch inner diameter (i.d.)
- Ion source with a probe installed
- Syringe: 250 µL to 1000 µL
- Powder-free gloves, nitrile or neoprene recommended
- Safety glasses
- Lab coat

Note: All test solutions must be kept refrigerated. If they are left out of the refrigerator for longer than 48 hours, then discard them and use new solutions.

CAUTION: Potential Wrong Result. Do not use expired solutions or solutions that have not been stored at the indicated storage temperature.

Prepare for the Test

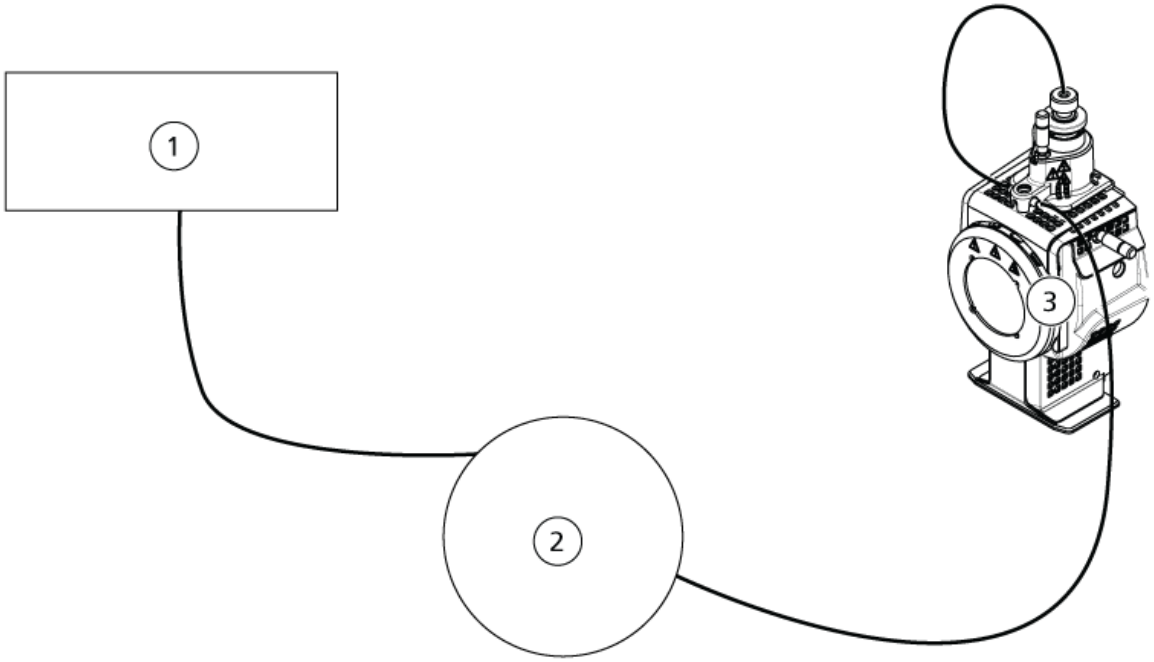
WARNING! Electrical Shock Hazard. Avoid contact with the high voltages applied to the ion source during operation. Put the system in Standby state before adjusting the sample tubing or other equipment near the ion source.

- When installing a new ion source, make sure that the mass spectrometer is performing to specifications with the existing ion source.
- Install the ion source on the mass spectrometer.
- Make sure that the ion source is fully optimized. Refer to the document: *Operator Guide* for the ion source.

- Refer to all applicable safety data sheets for any necessary precautions before handling chemical solutions or solvents.
- Install the probe to be tested.
- Connect the grounding union on the ion source to a pump, through a manual injector equipped with a 5 µL loop, or to an autosampler.

Refer to the figure: Figure 2-1.

Figure 2-1 LC Pump Configuration



Item	Description
1	Pump for the flow inlet
2	Injector or autosampler
3	Ion source

Test the Ion Source on Triple Quadrupole Systems

Test the TurboIonSpray Probe

CAUTION: Potential System Damage. Do not introduce any solvent flow until after the ion source has reached the correct temperature.

For information about installing or optimizing the ion source, refer to the document: *Operator Guide* for the ion source.

1. Configure the HPLC pump to deliver 0.2 mL/min of the mobile phase.
2. In SCIEX OS open a previously optimized method or set new method parameters as shown in the following table.

Table 2-1 Method Parameters

Parameter	Value
MS Parameters	
Experiment	MRM
Q1 mass	609.3
Q3 mass	195.1
Method duration (min)	10
Source/Gas Parameters	
Ion source gas 1	60 (or as optimized)
Ion source gas 2	70 (or as optimized)
Curtain gas	20 (or as optimized)
Source temperature	700 (or as optimized)
Spray voltage	4500 (or as optimized)
Compound Parameters	
DP (V)	100 (or as optimized)
CE (V)	45 (or as optimized)
CXP (V)	As optimized

3. Click **Start** to run the method.

WARNING! Ionizing Radiation Hazard, Biohazard, or Toxic Chemical Hazard. Make sure that the electrode protrudes beyond the tip of the probe, to prevent hazardous vapors from escaping from the source. The electrode must not be recessed within the probe.

CAUTION: Potential System Damage. Optimize using the highest possible flow rate for the gas for the Curtain Gas Interface to avoid contaminating the mass spectrometer.

4. Perform several 5 µL injections of the reserpine solution while optimizing the following for maximum signal intensity and stability:
   - The vertical and horizontal position of the probe
   - The electrode tip extension
   - CUR, TEM, GS1, GS2, and IS
5. Click **Acquire** to begin collecting data.
6. Perform three 5 µL injections of the reserpine solution.

Tip! We recommend that the 5 µL loop be overfilled with 30 µL to 40 µL of the solution.

7. Print the results.
8. Average the three intensities of the ions and then record the result in the Data Log.
9. Confirm that the average intensity is acceptable. Refer to the section: Data Log: Turbo V Ion Source.
   If the result is not acceptable, then refer to the section: Troubleshooting Tips.
10. After completing the tests, stop the LC pump, set **Source temperature** to 0, and then let the probe cool.

Test the APCI Probe

CAUTION: Potential System Damage. Do not introduce any solvent flow until after the ion source has reached the correct temperature.

For information about installing or optimizing the ion source, refer to the document: *Operator Guide* for the ion source.

1. Configure the HPLC pump to deliver 1 mL/min of the mobile phase.

2. In SCIEX OS open a previously optimized method or set new method parameters as shown in the following table.

Table 2-2 Method Parameters

Parameter	Value
MS Parameters	
Experiment	MRM
Q1 mass	609.3
Q3 mass	195.1
Method duration (min)	10
Source/Gas Parameters	
Curtain gas	20 (or as optimized)
CAD Gas	9 (or as optimized)
Nebulizer current	3 (or as optimized)
Source temperature	425
Ion source gas 1	70 (or as optimized)
Compound Parameters	
DP (V)	100 (or as optimized)
CE (V)	45 (or as optimized)
CXP (V)	As optimized

3. Click **Start** to run the method.

WARNING! Ionizing Radiation Hazard, Biohazard, or Toxic Chemical Hazard. Make sure that the electrode protrudes beyond the tip of the probe, to prevent hazardous vapors from escaping from the source. The electrode must not be recessed within the probe.

CAUTION: Potential System Damage. Optimize using the highest possible flow rate for the gas for the Curtain Gas Interface to avoid contaminating the mass spectrometer.

4. Perform several 5 µL injections of the reserpine solution while optimizing the following for maximum signal intensity and stability:

   - The vertical and horizontal position of the probe

- The electrode tip extension
- CUR, GS1, and NC

5. Click **Acquire** to begin collecting data.
6. Perform three 5 µL injections of the reserpine solution.

Tip! We recommend that the 5 µL loop be overfilled with 30 µL to 40 µL of the solution.

7. Print the results.
8. Average the three intensities of the ions and then record the result in the Data Log.
9. Confirm that the average intensity is acceptable. Refer to the section: Data Log: Turbo V Ion Source.
   If the result is not acceptable, then refer to the section: Troubleshooting Tips.
10. After completing the tests, stop the LC pump, set **Source temperature** to 0, and then let the probe cool.

OptiFlow Turbo V Ion Source Tests 3

Run these tests in any of the following situations:

- When a new ion source is installed.
- After major maintenance to the ion source.
- Whenever the performance of the ion source must be assessed, either before starting a project or as part of a standard operating procedure.

WARNING! Ionizing Radiation Hazard, Biohazard, or Toxic Chemical Hazard. Do not use the ion source without knowledge of and training in the proper use, containment, and evacuation of toxic or injurious materials used with the ion source.

WARNING! Puncture Hazard, Ionizing Radiation Hazard, Biohazard, or Toxic Chemical Hazard. Discontinue use of the ion source if the ion source window is cracked or broken, and then contact a SCIEX Field Service Employee (FSE). Any toxic or injurious materials introduced in the equipment will be present in the source exhaust output. Exhaust from equipment should be vented from the room. Dispose of sharps following established laboratory safety procedures.

WARNING! Toxic Chemical Hazard. Wear personal protective equipment, including a laboratory coat, gloves, and safety glasses, to avoid skin or eye exposure.

WARNING! Ionizing Radiation Hazard, Biohazard, or Toxic Chemical Hazard. In the event of a chemical spill, review product safety data sheets for specific instructions. Make sure that the system is in Standby state before cleaning a spill near the ion source. Use appropriate personal protective equipment and absorbent wipes to contain the spill and dispose of it following local regulations.

Required Materials

- Test solution prepared from the 0.167 pmol/µL reserpine solution and the standard diluent provided in the SCIEX TripleTOF System Chemical Kit (PN 4456736)

  Note: This solution is also used to test the OptiFlow Turbo V ion source on SCIEX Triple Quad mass spectrometers.

- PEEK tubing 1/16-inch outer diameter (o.d.), 0.005-inch inner diameter (i.d.)
- Ion source with a Micro probe installed with a low microflow electrode.
- Syringe: 250 µL to 1000 µL
- Powder-free gloves, nitrile or neoprene recommended
- Safety glasses
- Lab coat

Note: All test solutions must be kept refrigerated. If they are left out of the refrigerator for longer than 48 hours, then discard them and use new solutions.

CAUTION: Potential Wrong Result. Do not use expired solutions or solutions that have not been stored at the indicated storage temperature.

Prepare for the Test

WARNING! Electrical Shock Hazard. Avoid contact with the high voltages applied to the ion source during operation. Put the system in Standby state before adjusting the sample tubing or other equipment near the ion source.

- When installing a new ion source, make sure that the mass spectrometer is performing to specifications with the existing ion source.
- Install the ion source on the mass spectrometer.
- Make sure that the ion source is fully optimized. Refer to the document: *Operator Guide* for the ion source.
- Refer to all applicable safety data sheets for any necessary precautions before handling chemical solutions or solvents.
- Install the probe to be tested.

Test the Ion Source on Triple Quadrupole Systems

Test the Probe

CAUTION: Potential System Damage. Do not introduce any solvent flow until after the ion source has reached the correct temperature.

Note: The OptiFlow Turbo V ion source is only available for the SCIEX 5500, 5500+, 6500, and 6500+ systems.

Note: This test is only for the Micro probe and the low microflow electrode.

For information about installing or optimizing the ion source, refer to the document: *Operator Guide* for the ion source.

1. Infuse the reserpine solution at a flow rate of 5 µL/min.
2. In SCIEX OS open a previously optimized method or set new method parameters as shown in the following table.

Table 3-1 Method Parameters

Parameter	Value
MS Parameters	
Experiment	MRM
Q1 mass	609.3 (or as optimized)
Q3 mass	195.1 (or as optimized)
Method duration (min)	10
Source/Gas Parameters	
Ion source gas 2	65 (or as optimized)
Ion source gas 1	25 (or as optimized)
Curtain gas	20 (or as optimized)
Source temperature	350 (optimized, with maximum of 350 °C.)
Spray voltage	4500 (maximum 4500)
Compound Parameters	

Table 3-1 Method Parameters (continued)

Parameter	Value
DP (V)	100 (or as optimized)
CE (V)	45 (or as optimized)
Syringe Pump Method Parameters	
Flow rate (µL/min)	5
Syringe size (µL)	250 µL to 1000 µL

3. Click **Start** to run the method.

CAUTION: Potential System Damage. Optimize using the highest possible flow rate for the gas for the Curtain Gas Interface to avoid contaminating the mass spectrometer.

4. Infuse the reserpine solution at 5 µL/min for at least 5 minutes while optimizing CUR, TEM, GS1, GS2, and IS for maximum signal intensity and stability.
5. Click **Acquire** to begin collecting data.
6. Print the results.
7. Record the result in the Data Log.
8. Average the three intensities of the ions and then record the result in the Data Log.
9. Confirm that the average intensity is acceptable. Refer to the section: Data Log: OptiFlow Turbo V Ion Source.
   If the result is not acceptable, then refer to the section: Troubleshooting Tips.

Troubleshooting Tips 4

Symptom	Possible Cause	Corrective Action
Low peak intensity	1. The source position, tip protrusion, or source parameter values are incorrect. 2. The syringe or sample line is leaking. 3. Q1 or Q3 is not calibrated. 4. The sample has degraded or has a low concentration. 5. There is a problem with the LC system.	1. Optimize the source. 2. Make sure there are no leaks. 3. Use MS Tune workspace to calibrate Q1 or Q3. 4. Make sure that the sample concentration is correct. Use either a fresh sample or a sample that has been frozen. 5. Troubleshoot the LC system.
Poor resolution	The mass spectrometer is not optimized.	Optimize the mass spectrometer.
Poor sensitivity	1. The interface components (front end) are dirty. 2. Solvent vapor or other unknown compounds are present in the analyzer region. 3. The sample was not prepared correctly or the sample has degraded. 4. There are leaks at the sample inlet. 5. The ion source is faulty.	1. Clean the interface components and reposition the ion source. 2. Optimize the flow for the Curtain Gas interface. 3. Confirm that the sample was prepared correctly. 4. Make sure that the fittings are tight and replace fittings if leaks continue. Do not overtighten the fittings. 5. Install and optimize an alternate ion source. If the problem persists, then contact an FSE.

Symptom	Possible Cause	Corrective Action
Low signal	1. The declustering potential is not optimized. 2. The electrode might be dirty or blocked.	1. Optimize declustering to achieve the best signal or signal-to-noise ratio. The optimum values may be different from those found using other ion sources. 2. Clean the electrode.
Low signal-to-noise ratio	1. The source position, tip protrusion, or source parameter values are incorrect. 2. The syringe or sample line is leaking. 3. The diluent is contaminated.	1. Optimize the source. 2. Make sure theree are no leaks. 3. Use freshly prepared diluent, made with MS-grade reagents (0.1% formic acide and 10% acetonitrile).

Symptom	Possible Cause	Corrective Action
High background noise	1. The diluent is contaminated. 2. The syringe or sample line is dirty. 3. There is residue on the interface. 4. The ion source temperature is too high. 5. The heater gas flow rate (Ion source gas 2) is too high. 6. The ion source is contaminated.	1. Use freshly prepared diluent made with MS-grade reagents (0.1% formic acid, 10% acetonitrile). 2. Clean or replace the syringe or sample line. 3. Clean the curtain plate and orifice plate. Refer to the mass spectrometer document: *Qualified Maintenance Person Guide*. If the problem is not resolved, clean Q0 or the QJet ion guide. 4. Optimize the ion source temperature. 5. Optimize the heater gas flow. 6. Clean or replace the ion source components and condition the source and the front end: a. Move the APCI or TIS probe to the furthest position from the aperture (vertically and horizontally). b. Infuse or inject 50:50 methanol:water with a pump flow of 1 mL/min. c. In the SCIEX OS software, set the ion

Symptom	Possible Cause	Corrective Action
		source temperature to 650, ion source gas 1 to 60, and ion source gas 2 to 60. d. Set the flow for the Curtain Gas interface to 45 or 50. e. Run for a minimum of 2 hours or preferably overnight, for best results.
During testing, the ion source fails to meet specifications	The mass spectrometer has not passed the installation tests.	Do installation tests on the mass spectrometer with the default source.
Temperature not reached or the temperature too high or unstable	The interface heater is faulty.	Open the Mass Spectrometer Detailed Status dialog. The **Source Temperature** field should contain the set temperature and the **Interface Heater** should be **Ready**. If not, then contact a Qualified Maintenance Person (QMP) or Field Service Employee (FSE) to replace the interface heater.

Data Log: IonDrive Turbo V Ion Source A

System Information

Table A-1 Mass Spectrometer Information

Mass spectrometer serial number	

Ion Source Information

Component	Serial Number
Ion Source	
TurboIonSpray probe	
APCI probe	

IonDrive Turbo V Ion Source Test Results

Note: The IonDrive Turbo V ion source is supported by SCIEX 6500 and 6500+ systems.

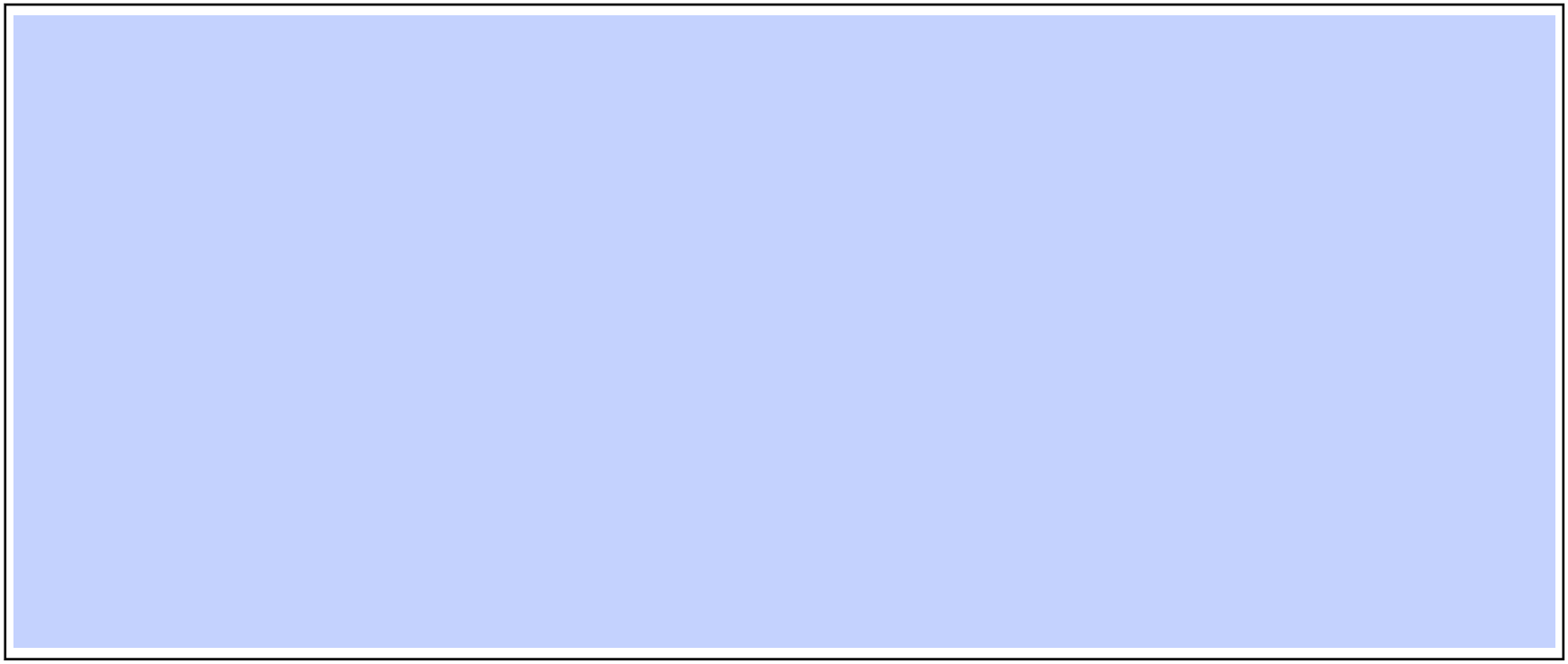
Probe	Intensity (cps)	Intensity (cps)	Results (cps)
	6500	6500+	
TurboIonSpray probe	1.25×10^6	1.9×10^6	

Probe	Intensity (cps)	Intensity (cps)	Results (cps)
	6500	6500+	
APCI probe	5.0×10^5	7.5×10^5	

Signoff

Organization			
Service request number			
Customer contact name		Date (yyyy-mm-dd)	
Customer contact signature			
FSE name		Date (yyyy-mm-dd)	
FSE signature			

Comments and Exceptions



Data Log: Turbo V Ion Source B

System Information

Table B-1 Mass Spectrometer Information

Mass spectrometer serial number	

Ion Source Information

Component	Serial Number
Ion Source	
TurboIonSpray probe	
APCI probe	

Turbo V Ion Source Test Results

Note: Tests for SCIEX 6500 and 6500+ systems are run in Low Mass mode.

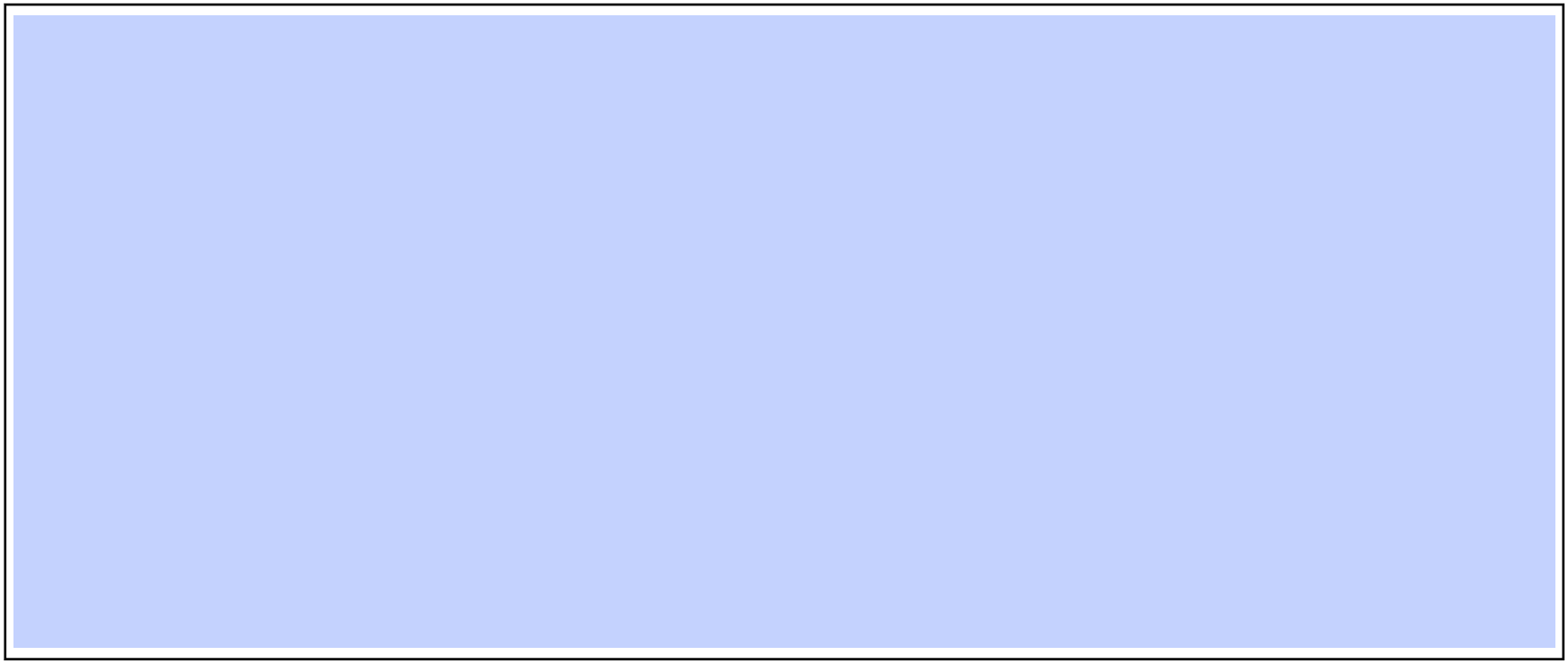
Intensity (cps)				Results
4500	5500/5500+	6500	6500+	
TurboIonSpray probe				

Intensity (cps)				Results
4500	**5500/5500+**	**6500**	**6500+**	
2.0×10^5	5.0×10^5	1.0×10^6	1.5×10^6	
APCI probe				
1.0×10^5	2.5×10^5	5.0×10^5	7.5×10^5	

Signoff

Organization			
Service request number			
Customer contact name		Date (yyyy-mm-dd)	
Customer contact signature			
FSE name		Date (yyyy-mm-dd)	
FSE signature			

Comments and Exceptions



Data Log: OptiFlow Turbo V Ion Source C

System Information

Table C-1 Mass Spectrometer Information

Mass spectrometer serial number	

Ion Source Information

Component	Serial Number
Ion Source	
Micro 1–50 µL probe	
Electrode 1–10 µL	

OptiFlow Turbo V Ion Source Test Results

Note: Tests for SCIEX 6500 and 6500+ systems are run in Low Mass mode.

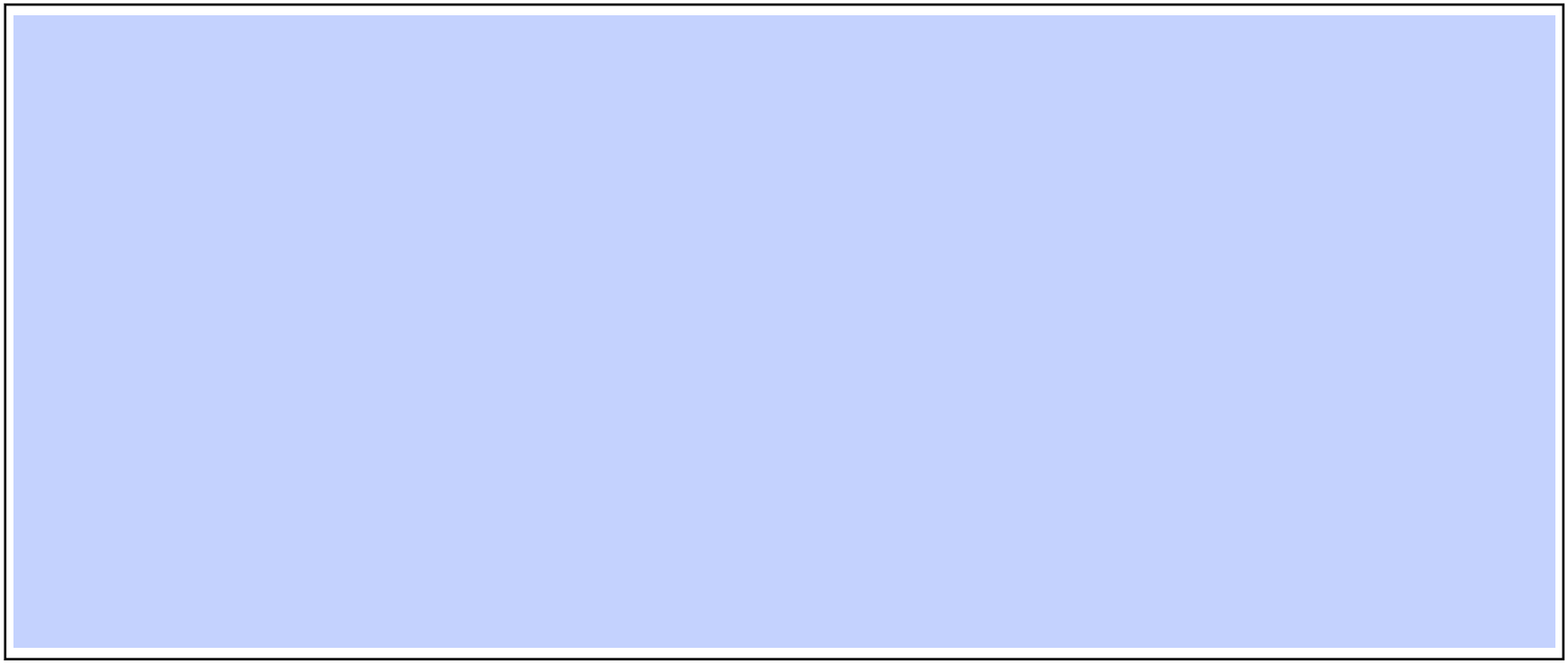
Intensity (cps)			Results
5500/5500+	**6500**	**6500+**	
Micro 1–50 µL probe			

Intensity (cps)				Results
5500/5500+	6500	6500+		
5.0×10^5	1.0×10^6	1.5×10^6	1.0×10^4	

Signoff

Organization			
Service request number			
Customer contact name		Date (yyyy-mm-dd)	
Customer contact signature			
FSE name		Date (yyyy-mm-dd)	
FSE signature			

Comments and Exceptions



SCIEX 6500 and 6500+ System Parameters D

The first number under each scan type is the preset value. The range of numbers is the accessible range for each parameter.

Table D-1 6500 and 6500+ System Parameters

Parameter ID	Access ID	Positive Polarity			Negative Polarity		
		Q1	Q3	MS/MS	Q1	Q3	MS/MS
CUR	CUR	20 20 to 55	20 20 to 55	20 20 to 55	20 20 to 55	20 20 to 55	20 20 to 55
CAD[1]	CAD[1]	0 N/A	6 N/A	9 0 to 12	0 N/A	6 N/A	9 0 to 12
IS[2 3 4 5]	IS[2 3 4]	5500 0 to 5500	5500 0 to 5500	5500 0 to 5500	–4500 –4500 to 0	–4500 –4500 to 0	–4500 –4500 to 0
NC[6 3]	NC[3]	3 0 to 5	3 0 to 5	3 0 to 5	–3 –5 to 0	–3 –5 to 0	–3 –5 to 0

1 SCIEX Triple Quad 6500 or 6500+ system, Low Mass (LM)
2 Turbo V ion source
3 IonDrive Turbo V ion source
4 TurboIonSpray (TIS) probe
5 OptiFlow Turbo V ion source
6 APCI probe

Table D-1 6500 and 6500+ System Parameters (continued)

Parameter ID	Access ID	Positive Polarity			Negative Polarity		
		Q1	Q3	MS/MS	Q1	Q3	MS/MS
TEM[2 3 4 5]	TEM[2 3 4]	0 0 to 750	0 0 to 750	0 0 to 750	0 0 to 750	0 0 to 750	0 0 to 750
OR (DP = OR)	DP	100 0 to 300	100 0 to 300	100 0 to 300	–100 –300 to 0	–100 –300 to 0	–100 –300 to 0
Q0 (EP = –Q0)	EP	10 2 to 15	10 2 to 15	10 2 to 15	–10 –15 to –2	–10 –15 to –2	–10 –15 to –2
IQ1 (IQ1 = Q0 + offset)	IQ1	Q0 + (–0.5) –0.1 to –2	Q0 + (–0.5) –0.1 to –2	Q0 + (–0.5) –0.1 to –2	Q0 + 0.5 0.1 to 2	Q0 + 0.5 0.1 to 2	Q0 + 0.5 0.1 to 2
ST (ST = Q0 + offset)	ST	Q0 + (-8) –12 to –5	Q0 + (-8) –12 to –5	Q0 + (-8) -12 to –5	Q0 + 8 5 to 12	Q0 + 8 5 to 12	Q0 + 8 5 to 12
RO1 (IE1 = Q0 – RO1)	IE1	1 0 to 3	N/A	1 0 to 3	–1 –3 to –0	N/A	–1 –3 to –0
IQ2 (IQ2 = Q0 + offset)	IQ2	Q0+ (–10) –30 to –8	Q0+ (–10) –30 to –8	Q0+ (–10) –30 to –8	Q0 + 10 8 to 30	Q0 + 10 8 to 30	Q0 + 10 8 to 30

Table D-1 6500 and 6500+ System Parameters (continued)

Parameter ID	Access ID	Positive Polarity			Negative Polarity		
		Q1	Q3	MS/MS	Q1	Q3	MS/MS
RO2	RO2	–20 N/A	–20 N/A	N/A	20 N/A	20 N/A	N/A
RO2 (CE = Q0 – RO2)	CE	N/A	N/A	30 5 to 180	N/A	N/A	–30 –180 to –5
ST3 (ST3 = RO2 + offset)	ST3	RO2 – 10 –30 to –5	N/A	N/A	RO2 + 10 5 to 30	N/A	N/A
ST3 (CXP = RO2 – ST3)	CXP	N/A	15 0 to 55	15 0 to 55	N/A	–15 –55 to 0	–15 –55 to 0
RO3	RO3	–50 N/A	N/A	N/A	50 N/A	N/A	N/A
RO3 (IE3 = RO2 – RO3)	IE3	N/A	1 0 to 5	1 0 to 5	N/A	–1 –5 to 0	–1 –5 to 0

Table D-1 6500 and 6500+ System Parameters (continued)

Parameter ID	Access ID	Positive Polarity			Negative Polarity		
		Q1	Q3	MS/MS	Q1	Q3	MS/MS
CEM	CEM	1700 0 to 3300	1700 0 to 3300	1700 0 to 3300	1700 0 to 3300	1700 0 to 3300	1700 0 to 3300
GS1	GS1	20 0 to 90	20 0 to 90	20 0 to 90	20 0 to 90	20 0 to 90	20 0 to 90
GS2	GS2	0 0 to 90	0 0 to 90	0 0 to 90	0 0 to 90	0 0 to 90	0 0 to 90

SCIEX 5500 and 5500+ System Parameters

E

The first number under each scan type is the preset value. The range of numbers is the accessible range for each parameter.

Table E-1 5500 and 5500+ System Parameters

Parameter ID	Access ID	Positive Polarity			Negative Polarity		
		Q1	Q3	MS/MS	Q1	Q3	MS/MS
CUR	CUR	20 10 to 55	20 10 to 55	20 10 to 55	20 10 to 55	20 10 to 55	20 10 to 55
CAD	CAD	0 N/A	6 N/A	Med (9) 0 to 12	0 N/A	5 N/A	Med (9 0 to 12
IS[7] [8]	IS[8]	5500 0 to 5500	5500 0 to 5500	5500 0 to 5500	–4500 –4500 to 0	–4500 –4500 to 0	–4500 –4500 to 0
NC[9]	NC[9]	3 0 to 5	3 0 to 5	3 0 to 5	–3 –5 to 0	–3 –5 to 0	–3 –5 to 0

[7] Turbo V ion source
[8] TurboIonSpray probe
[9] APCI probe

Table E-1 5500 and 5500+ System Parameters (continued)

Parameter ID	Access ID	Positive Polarity			Negative Polarity		
		Q1	Q3	MS/MS	Q1	Q3	MS/MS
TEM[8 9 5]	TEM[8 9]	0 0 to 750	0 0 to 750	0 0 to 750	0 0 to 750	0 0 to 750	0 0 to 750
OR (DP = OR)	DP	100 0 to 300	100 0 to 300	100 0 to 300	–100 –300 to 0	–100 –300 to 0	–100 –300 to 0
Q0 (EP = –Q0)	EP	10 2 to 15	10 2 to 15	10 2 to 15	–10 –15 to –2	–10 –15 to –2	–10 –15 to –2
IQ1 (IQ1 = Q0 + offset)	IQ1	Q0 + (–0.5) –0.1 to –2	Q0 + (–0.5) –0.1 to –2	Q0 + (–0.5) –0.1 to –2	Q0 + 0.5 0.1 to 2	Q0 + 0.5 0.1 to 2	Q0 + 0.5 0.1 to 2
ST (ST = Q0 + offset)	ST	Q0 + (-8) –12 to –5	Q0 + (-8) –12 to –5	Q0 + (-8) -12 to –5	Q0 + 8 12 to 5	Q0 + 8 12 to 5	Q0 + 8 12 to 5
RO1 (IE1 = Q0 – RO1)	IE1	1 0 to 3	N/A	1 0 to 3	–1 –3 to –0	N/A	–1 –3 to –0

Table E-1 5500 and 5500+ System Parameters (continued)

Parameter ID	Access ID	Positive Polarity			Negative Polarity		
		Q1	Q3	MS/MS	Q1	Q3	MS/MS
IQ2 (IQ2 = Q0 + offset)	IQ2	Q0+ (–10) –30 to –8	Q0+ (–10) –30 to –8	Q0+ (–10) –30 to –8	Q0 + 10 8 to 30	Q0 + 10 8 to 30	Q0 + 10 8 to 30
RO2	RO2	–20 N/A	–20 N/A	N/A	20 N/A	20 N/A	N/A
RO2 (CE = Q0 – RO2)	CE	N/A	N/A	30 5 to 180	N/A	N/A	–30 –180 to –5
ST3 (ST3 = RO2 + offset)	ST3	RO2 – 10 –30 to –5	N/A	N/A	RO2 + 10 5 to 30	N/A	N/A
ST3 (CXP = RO2 – ST3)	CXP	N/A	15 0 to 55	15 0 to 55	N/A	–15 –55 to 0	–15 –55 to 0
RO3	RO3	–50 N/A	N/A	N/A	50 N/A	N/A	N/A

Table E-1 5500 and 5500+ System Parameters (continued)

Parameter ID	Access ID	Positive Polarity			Negative Polarity		
		Q1	Q3	MS/MS	Q1	Q3	MS/MS
RO3 (IE3 = RO2 – RO3)	IE3	N/A	1 0 to 5	1 0 to 5	N/A	–1 –5 to 0	–1 –5 to 0
DF [10]	DF	–200 –300 to 0	–200 –300 to 0	–200 –300 to 0	200 0 to 300	200 0 to 300	200 0 to 300
CEM[10]	CEM	1800 0 to 3300	1800 0 to 3300	1800 0 to 3300	1800 0 to 3300	1800 0 to 3300	1800 0 to 3300
CEM[11]	CEM	1700 0 to 3300	1700 0 to 3300	1700 0 to 3300	1700 0 to 3300	1700 0 to 3300	1700 0 to 3300
GS1	GS1	20 0 to 90	20 0 to 90	20 0 to 90	20 0 to 90	20 0 to 90	20 0 to 90
GS2	GS2	0 0 to 90	0 0 to 90	0 0 to 90	0 0 to 90	0 0 to 90	0 0 to 90

[10] 5500 systems only
[11] 5500+ systems only

Table E-1 5500 and 5500+ System Parameters (continued)

Parameter ID	Access ID	Positive Polarity			Negative Polarity		
		Q1	Q3	MS/MS	Q1	Q3	MS/MS
IHT	IHT	150 0 to 250	150 0 to 250	150 0 to 250	150 0 to 250	150 0 to 250	150 0 to 250

SCIEX 4500 System Parameters

F

The first number under each scan type is the preset value. The range of numbers is the accessible range for each parameter.

Table F-1 4500 Instrument Parameters

Parameter ID	Access ID	Positive Polarity			Negative Polarity		
		Q1	Q3	MS/MS	Q1	Q3	MS/MS
CUR	CUR	20 10 to 55	20 10 to 55	20 10 to 55	20 10 to 55	20 10 to 55	20 10 to 55
CAD	CAD	0 N/A	6 N/A	Medium (9) 0 to 12	0 N/A	6 N/A	Medium (9) 0 to 12
IS[12] [13]	IS[12] [13]	5500 0 to 5500	5500 0 to 5500	5500 0 to 5500	–4500 –4500 to 0	–4500 –4500 to 0	–4500 –4500 to 0
NC[14]	NC[14]	3 0 to 5	3 0 to 5	3 0 to 5	–3 –5 to 0	–3 –5 to 0	–3 –5 to 0

[12] Turbo V ion source
[13] TurboIonSpray probe
[14] APCI probe

Table F-1 4500 Instrument Parameters (continued)

Parameter ID	Access ID	Positive Polarity			Negative Polarity		
		Q1	Q3	MS/MS	Q1	Q3	MS/MS
TEM[13 14]	TEM[13 14]	0 0 to 750	0 0 to 750	0 0 to 750	0 0 to 750	0 0 to 750	0 0 to 750
OR (DP = OR)	DP	100 0 to 300	100 0 to 300	100 0 to 300	–100 –300 to 0	–100 –300 to 0	–100 –300 to 0
Q0 (EP = –Q0)	EP	10 2 to 15	10 2 to 15	10 2 to 15	–10 –15 to –2	–10 –15 to –2	–10 –15 to –2
IQ1 (IQ1 = Q0 + offset)	IQ1	Q0 + (–0.5) –0.1 to –2	Q0 + (–0.5) –0.1 to –2	Q0 + (–0.5) –0.1 to –2	Q0 + 0.5 0.1 to 2	Q0 + 0.5 0.1 to 2	Q0 + 0.5 0.1 to 2
ST (ST = Q0 + offset)	ST	Q0 + (-8) –12 to –5	Q0 + (-8) –12 to –5	Q0 + (-8) -12 to –5	Q0 + 8 12 to 5	Q0 + 8 12 to 5	Q0 + 8 12 to 5
RO1 (IE1 = Q0 – RO1)	IE1	1 0 to 3	N/A	1 0 to 3	–1 –3 to 0	N/A	–1 –3 to 0
IQ2 (ST = Q0 + offset)	IQ2	Q0 +(–10) –30 to –8	Q0 + (–11) –30 to –8	Q0 + (–10) –30 to –8	Q0 + 10 8 to 30	Q0 + 10 8 to 30	Q0 + 10 8 to 30

Table F-1 4500 Instrument Parameters (continued)

Parameter ID	Access ID	Positive Polarity			Negative Polarity		
		Q1	Q3	MS/MS	Q1	Q3	MS/MS
RO2	RO2	–20 N/A	–20 N/A	N/A	20 N/A	20 N/A	N/A
RO2 (CE = Q0 – RO2)	CE	N/A	N/A	30 5 to 180	N/A	N/A	–30 –180 to –5
ST3 (ST3 = RO2 + offset)	ST3	RO2 – 10 –30 to –5	N/A	N/A	RO2 + 10 5 to 30	N/A	N/A
ST2 (CXP = RO2 - ST3)	CXP	N/A	15 0 to 55	15 0 to 55	N/A	–15 –55 to 0	–15 –55 to 0
RO3	RO3	–50 Fixed	N/A	N/A	50 Fixed	N/A	N/A
RO3 (IE3 = RO2 – RO3)	IE3	N/A	1 0 to 5	1 0 to 5	N/A	–1 –5 to 0	–1 –5 to 0
DF	DF	–200 –300 to 0	–200 –300 to 0	–200 –300 to 0	200 0 to 300	200 0 to 300	200 0 to 300

Table F-1 4500 Instrument Parameters (continued)

Parameter ID	Access ID	Positive Polarity			Negative Polarity		
		Q1	Q3	MS/MS	Q1	Q3	MS/MS
CEM	CEM	2000 0 to 3300	2000 0 to 3300	2000 0 to 3300	2000 0 to 3300	2000 0 to 3300	2000 0 to 3300
GS1	GS1	20 0 to 90	20 0 to 90	20 0 to 90	20 0 to 90	20 0 to 90	20 0 to 90
GS2	GS2	0 0 to 90	0 0 to 90	0 0 to 90	0 0 to 90	0 0 to 90	0 0 to 90
IHT	IHT	150 0 to 250	150 0 to 250	150 0 to 250	150 0 to 250	150 0 to 250	150 0 to 250

Prepare a Reserpine Dilution 60:1 (10 pg/µL) G

Follow this procedure to create the reserpine dilution from the reserpine 1 pmol/µL (PN 4405236).

1. Make the stock solution by adding 4.0 mL of dilution solvent to the vial.
2. Cap the vial and mix the contents gently or sonicate the vial to dissolve the material.
   This step produces a 1 pmol/µL solution of reserpine.
3. Put 1 mL of reserpine stock solution in a clean vial and add 5 mL of dilution solvent.
4. Combine 1 mL of the 6:1 dilution and 9 mL of dilution solvent.
   This step produces a 60:1 reserpine dilution.