

Keystone Software

User Guide



RUO-IDV-05-10456-A

This document is provided to customers who have purchased SCIEX equipment to use in the operation of such SCIEX equipment. This document is copyright protected and any reproduction of this document or any part of this document is strictly prohibited, except as SCIEX may authorize in writing.

Software that may be described in this document is furnished under a license agreement. It is against the law to copy, modify, or distribute the software on any medium, except as specifically allowed in the license agreement. Furthermore, the license agreement may prohibit the software from being disassembled, reverse engineered, or decompiled for any purpose. Warranties are as stated therein.

Portions of this document may make reference to other manufacturers and/or their products, which may contain parts whose names are registered as trademarks and/or function as trademarks of their respective owners. Any such use is intended only to designate those manufacturers' products as supplied by SCIEX for incorporation into its equipment and does not imply any right and/or license to use or permit others to use such manufacturers' and/or their product names as trademarks.

SCIEX warranties are limited to those express warranties provided at the time of sale or license of its products and are the sole and exclusive representations, warranties, and obligations of SCIEX. SCIEX makes no other warranty of any kind whatsoever, expressed or implied, including without limitation, warranties of merchantability or fitness for a particular purpose, whether arising from a statute or otherwise in law or from a course of dealing or usage of trade, all of which are expressly disclaimed, and assumes no responsibility or contingent liability, including indirect or consequential damages, for any use by the purchaser or for any adverse circumstances arising therefrom. (GEN-IDV-09-10816-C)

For Research Use Only. Not for use in Diagnostic Procedures.

Trademarks and/or registered trademarks mentioned herein, including associated logos, are the property of AB Sciex Pte. Ltd., or their respective owners, in the United States and/or certain other countries.

AB SCIEX[™] is being used under license.

© 2021 DH Tech. Dev. Pte. Ltd.



AB Sciex Pte. Ltd. Blk33, #04-06 Marsiling Industrial Estate Road 3 Woodlands Central Industrial Estate, Singapore 739256

Contents

1 Introduction	4
What is AnIML?	4
2 Configure the Analyst [®] Software	
Update Appearance Options on the IDA Explorer Tab	5
2 Kovstona Convertor Software	7
Configure the Keystone Converter Software	،، 7
Convert a wiff File	،، 13
Convert an rdb File	
Convert an ata or atd File	
Convert all of the Files in a Project	22
Convert Data using the Command Line	24
Renew the Keystone Converter Software License	26
4 Keystone Viewer Software	
View Converted wiff Files	
Open a wiff.animl File	27
View the Experiment Workflow	27
View MRM Transition Information	29
View Extracted Ion Chromatogram (XIC) Information	34
View Converted rdb Files	58
Open an rdb.animl File	58
View a Results Table	59
View Converted Audit Trail Files	61
Open an ata.animi or atd.animi File	61
View Total Ion Chromatogram (TIC) Information	
View Audit Trail Generated by the Keystone Converter Software	
Renew the Reystone viewer Soltware License	
Contact Us	68
Customer Training	68
Online Learning Center	68
SCIEX Support	68
	68
Documentation	

Introduction

The Keystone Software consists of the following applications:

- The Keystone Converter Software is: A desktop application that converts wiff, rdb, and audit trail files, generated by the Analyst[®] Software, to AnIML format.
- The Keystone Viewer Software is: A desktop application that is used to view the converted AnIML files.

For information on how to renew the software licenses, refer to the *Keystone Converter Software Installation* Guide.

What is AnIML?

AnIML is an open standard XML data format for storage and sharing of experiment data. The AnIML file is a human-readable format that captures analytical data generated by many different analytical techniques, such as MS, NMR, and IR, from many different analytical instrument vendors. AnIML provides a generic data container that permits the storage of analytical data, including the following:

- Sample information
- Method information
- Measurement results
- Instruments and software used
- Workflow information that ties experiments and samples together

AnIML files derived from the various analytical techniques and vendors can be opened and viewed with an AnIML file viewer. The original proprietary software that created the file is no longer required.

Configure the Analyst[®] Software

- 1. Make sure that the Analyst[®] Software is open and running in the background before converting any data.
- 2. Make sure that the data to be converted is in an Analyst Data Root folder and the Analyst Software must have that data root folder set as the active data root folder.

If wiff files are converted using the Keystone Converter Software, then two audit records are created in the Analyst[®] Software Project Audit Trail for every sample converted. If a large number of samples are being converted, then this behaviour might be undesirable.

- 3. To avoid creating two audit records, in the active Project Audit Map, clear the **Audited** checkbox for the **Closed Module** and the **Data File has been opened** fields.
- 4. In the Analyst[®] Software, update the IDA Explorer Appearance Options tab. Refer to Update Appearance Options on the IDA Explorer Tab.

Update Appearance Options on the IDA Explorer Tab

This procedure applies to the Analyst[®] 1.7.2 Software.

To make sure that data is converted and shown correctly in the Keystone Viewer Software, before converting IDA data, update the IDA Explorer tab in the Appearance Options dialog.

- 1. Open the Analyst[®] 1.7.2 Software.
- 2. On the Navigation bar, click **Explore**.
- 3. From the menu, select **Tools > Settings > Appearance Options**.

Figure 2-1 Menu Bar



4. Click the **IDA Explorer** tab and then clear the **Use IDA Explorer to display IDA samples** check box.

Figure 2-2 IDA Explorer Tab

Appearance Optio	ns						×
Graph Colors	& Fonts	Other Graph Op	otions	Mu	tiple Graph Optio	ns F	le Information
Miscellaneous	Graph orer to di s h} hergy (CE Weight (I ill Time (I	Header Tool Tip splay IDA samples () WW) DFT)	Calcula	ators	Fragment Interp	pretation	IDA Explorer
LIT Column Op	tions Energy (/ Precursor	VF2) Mass (2nd Pre)					
		Use Def	aults		OK	Cancel	Help

Keystone Converter Software

Note: Before converting data, make sure that the Analyst[®] Software is open and running in the background. Data to be converted must be in an Analyst Data Root folder and the Analyst[®] Software must have that data root folder set as the active data root folder.

Note: If the Analyst[®] Software version 1.7.2 is installed, then the Analyst[®] 1.7.2 Patch for Keystone Software must also be installed.

Configure the Keystone Converter Software

- 1. Click **Start > SCIEX Keystone > SCIEX Keystone Converter** to open the Keystone Converter Software.
- 2. Click Settings.

Figure 3-1 SCIEX Keystone Converter Dialog: Settings Page

SCIEX Keystone Converte		-		>
Convert Settings	Help			
C				
Converted files				
Destination folder:	<source folder=""/> Browse Reset to default			
Create index file	s			
Use a single outp	utfile			
Digital signature				
Signing key present	Yes 🗸 Select key			
Apply digital sign	ature			
		_	_	-

Note: The following settings are automatically configured by the software:

- The **Destination folder** is **<source folder>**. The default destination folder is the folder that contains the source file.
- The Create index files check box is selected.
- The Use a single output file check box is cleared.
- The Signing key present field is set to Yes.
- The Apply digital signature check box is selected.
- 3. (Optional) To change the default **Destination folder**, do this:

Note: If a destination folder is not configured, then the software automatically saves the converted files in the same location as the source files.

a. Click Browse.

🌇 Select a dest	ination folder			×
Look <u>i</u> n:	Converted	Files ~	🤣 📂 📰 -	
Recent I				
Desktop				
Docume				
SThis PC				
۲	Folder <u>n</u> ame:	C:\Keystone\Converted Files		Select
Network	Files of type:		~	Cancel

Figure 3-2 Select a destination folder Dialog

b. Browse to the appropriate folder and then click **Select**.

The Settings page refreshes and the selected folder is shown in the **Destination folder** field.

4. (Optional) Clear the **Create index files** check box.

Index files are used by the Viewer to improve the loading of large files. Index files are stored in the same location as the AnIML files.

5. (Optional) Select the **Use a single output file** check box.

If this option is selected, then all selected files are consolidated in one AnIML file.

- 6. (Optional) By default, the **Apply digital signature** check box is selected. To change the digital key when applying the digital signature, do this:
 - a. Click Select key.

Figure 3-3 Select signing key and certificate Dialog

Select signing key and certificate	×
1 Step:	
1. Step.	
Select a KeyStore and open it with a password	
Open	

b. Click Open.

Figure 3-4 Open a Keystore Dialog

<u> KS</u> Open a KeySi	tore		×
Look in:	config	 j* 🕫 1 	 -
Recent I	Clientkeyst	ore.jks	
Desktop			
Docume			
This PC			
1	File <u>n</u> ame:	clientkeystore.jks	Select
Network	Files of type:	Supported KeyStore files (.jks) ~	Cancel

c. Browse to the C:\ProgramData\KeystoneConverter\config folder, select the KeyStore file, and then click **Select**.

Figure 3-5 Please enter the KeyStore password Dialog

Please en	×		
?	Password:		
	OK	Cancel	

d. Type the KeyStore **Password** and then click **OK**.

Figure 3-6 Select signing key and certificate Dialog

Select signing key and certificate	×
1. Step: 🗸	
Select a KeyStore and open it with a password	
Open	
2. Step:	
Enter your alias and password to select your key and certificate	
Select key	

e. Click Select key.

Figure 3-7 Enter your alias and password Dialog

Enter your	alias and password	\times
?	Alias:	
	Password:	
	OK Cancel	

f. Type the Alias and Password and then click OK.

Figure 3-8 Select signing key and certificate Dialog



g. Click **Finish**.

A digital signature is applied to each converted file. The signature contains the name of the individual who completed the conversion and the date and time that the signature was applied.

7. Click **Convert** on the menu bar.

The Settings overview section shows a summary of the settings that were enabled.

Figure 3-9 Settings overview

Destination folder:	<source folder=""/>
Create index files:	Yes 🗸
Use a single output file:	No 🗙
Apply digital signature:	Yes 🗸
□ Include .RDB files □ Include .WIFF files	
□ Include .ATA files	

Convert a wiff File

Note: The active data root folder in the Analyst[®] Software must be the same data root that contains the data to be converted.

- 1. Open the Analyst[®] Software.
- 2. Click **Start > SCIEX Keystone > SCIEX Keystone Converter** to open the Keystone Converter Software.
- 3. Click **Convert**.
- 4. On the **Files** tab, click **Add files**.

SCIEX Keystone Converter				- 0	\times
<u>C</u> onvert <u>S</u> ettings	Help				
Convert Settings	Help		Settings overview Destination folder: Create index files: Use a single output file: Apply digital signature: Include .ATD files Include .RDB files Include .WIFF files	<source folder?<br=""/> No X No X Yes √	*
		Add files	⊠ Include .ATA files	Convert file	s

Figure 3-10 SCIEX Keystone Converter: Files Tab

The Add items dialog opens.

Figure 3-11 Add items Dialog

🔊 Add items				×
Look in:	📙 Data	~	🌶 📂 🎛	ł
Recent I				
Desktop				
Docume				
Land This PC				
۲	File <u>n</u> ame:			Add
Network	Files of type:	All Files	~	Cancel

5. Browse to and then select the wiff file to be converted.

Tip! Use the Ctrl or Shift key to select multiple files.

6. Click Add.

- 7. Select the **Include** .**WIFF files** check box. Refer to Figure 3-10.
- 8. Click **Convert files**.

The Output file dialog opens.

Note: If a default Destination folder has been configured, then the software opens the specified folder. If a default Destination folder has not been configured, then the software automatically saves the converted files in the same location as the source files.

9. If required, type a **File name** for the converted file.

Note: If one file is being converted, then the software automatically assigns the source file name to the converted file and appends *animl* to the file name. If the **Single output file** option was selected, then a **File name** must be provided.

10. Click Save.

The Output file dialog closes and a progress bar is shown.

11. When the conversion is complete, click **OK**.

The dialog refreshes, showing the results of the conversion.





Convert an rdb File

Note: The Analyst[®] Software must be open to convert an rdb file.

Note: The active data root folder in the Analyst[®] Software must be the same data root that contains the data to be converted.

- 1. Open the Analyst[®] Software.
- 2. Click Start > SCIEX Keystone > SCIEX Keystone Converter to open the Keystone Converter Software.
- 3. Click Convert.
- 4. On the **Files** tab, click **Add files**.

SCIEX Keystone Converter	- 🗆 X
<u>C</u> onvert <u>S</u> ettings <u>H</u> elp	
Files Projects	Settings overview
	Destination folder: <source folder=""/> Create index files: No ★ Use a single output file: No ★ Apply digital signature: Yes ✓ Include .ATD files Include .RDB files Include .WIFF files Include .ATA files
	Add files Clear Convert files

Figure 3-13 SCIEX Keystone Converter: Files Tab

The Add items dialog opens.

Figure 3-14 Add items Dialog

🔊 Add items				×
Look in:	Results	~	🧊 📂 🔠	•
Recent I				
Desktop				
Docume				
Land This PC				
۲	File <u>n</u> ame:			Add
Network	Files of type:	All Files	~	Cancel

5. Browse to and then select the rdb file to be converted.

Tip! Use the Ctrl or Shift key to select multiple files.

6. Click **Add**.

7. Select the Include .RDB files check box. Refer to Figure 3-13.

8. Click **Convert files**.

The Output file dialog opens.

Note: If a default Destination folder has been configured, then the software opens the specified folder. If a default Destination folder has not been configured, then the software automatically saves the converted files in the same location as the source files.

9. If required, type a **File name** for the converted file.

Note: If one file is being converted, then the software automatically assigns the source file name to the converted file and appends *animl* to the file name. If the **Single output file** option was selected, then a **File name** must be provided.

10. Click Save.

The Output file dialog closes and a progress bar is shown.

11. When the conversion is complete, click **OK**.

The dialog refreshes, showing the results of the conversion.

SCIEX Keys	tone Converter					-		×
Convert	Settings	<u>H</u> elp						
			1 of 1 f	iles have been converted				
ystone	Converter\F	iles\Data\Flu	u and Nor.rdb	Destination folderC:\ProgramData\	KeystoneConver	ter∖Fi	les\Da	ta
				Index files created				/
				Single output file	E	xampl	e2.anir	nl
				Digital signature applied				1
<			>					

Figure 3-15 Conversion Status: Success

Convert an ata or atd File

Note: The active data root folder in the Analyst[®] Software must be the same data root that contains the data to be converted.

- 1. Open the Analyst[®] Software.
- 2. Click **Start > SCIEX Keystone > SCIEX Keystone Converter** to open the Keystone Converter Software.
- 3. Click Convert.
- 4. On the **Files** tab, click **Add files**.

SCIEX Keystone Converter	– 0 ×
<u>C</u> onvert <u>S</u> ettings <u>H</u> elp	
Convert Settings Help	Settings overview Destination folder: <source folder=""/> Create index files: No Use a single output file: No Apply digital signature: Yes ✓ Include.ATD files Include.RDB files Include.ATA files Include.ATA files
Add files	Clear Convert files

Figure 3-16 SCIEX Keystone Converter: Files Tab

The Add items dialog opens.

Figure 3-17 Add items Dialog

🔊 Add items						×
Look in:	Project Info	rmation		~	ø 🖻 🖿	•
Recent I						
Desktop						
Docume						
This PC						
1	Folder name:					Add
Network	Files of type:	All Files			~	Cancel

5. Browse to and then select the ata or atd file to be converted.

Tip! Use the Ctrl or Shift key to select multiple files.

6. Click Add.

7. Select the **Include** .ATD files check box. Refer to Figure 3-16.

8. Click **Convert files**.

The Output file dialog opens.

Note: If a default Destination folder has been configured, then the software opens the specified folder. If a default Destination folder has not been configured, then the software automatically saves the converted files in the same location as the source files.

9. If required, type a **File name** for the converted file.

Note: If one file is being converted, then the software automatically assigns the source file name to the converted file and appends *animl* to the file name. If the **Single output file** option was selected, then a **File name** must be provided.

10. Click Save.

The Output file dialog closes and a progress bar is shown.

11. When the conversion is complete, click **OK**.

The dialog refreshes, showing the results of the conversion.

SCIEX Keyst	one Converter						-		×
Convert	Settings	<u>H</u> elp							
				1 of 1 f	files have been converted				
alyst D	ata\Project	s\Example	e\Project Inf	ormati	Destination folderC:\ProgramDa	ata\KeystoneConver	rter\Fil	les\Da	ta
					Index files created				/
					Single output file	Projec	tSettin	gs.anii	ml
					Digital signature applied				/
<				>					

Figure 3-18 Conversion Status: Success

Convert all of the Files in a Project

Note: The active data root folder in the Analyst[®] Software must be the same data root that contains the data to be converted.

- 1. Open the Analyst[®] Software.
- 2. Click **Start > SCIEX Keystone > SCIEX Keystone Converter** to open the Keystone Converter Software.
- 3. Click Convert.
- 4. On the **Projects** tab, click **Add projects**.

SCIEX Keystone Converter		-		\times
Convert Settings He	lp			
Files Projects	Settings overview Settings overview Destination folder: <sc< td=""> Create index files: Yes Use a single output file: Yes Apply digital signature: Yes Include .ATD files Include .RDB files Include .WIFF files Include .WIFF files</sc<>	ource fo :s ✓ :s ✓	lder>	
	Add projects Clear Con	nvertpr	ojects	

Figure 3-19 SCIEX Keystone Converter: Projects Tab

The Add items dialog opens.

Figure 3-20 Add items Dialog

KSi Add items				×
Look in:	Projects	~	🦻 📂 🔠	1
Part I				
Desktop				
Docume				
Land This PC				
۲	File name:			Add
Network	Files of type:	All Files	~	Cancel

5. Browse to and then select the project files to be converted.

Tip! Use the Ctrl or Shift key to select multiple projects.

- 6. Click **Add**.
- 7. Select the check box for each type of file to be converted. Refer to Figure 3-19.

Note: One or more check boxes can be selected.

8. Click **Convert projects**.

The Output file dialog opens.

Note: If a default Destination folder has been configured, then the software opens the specified folder. If a default Destination folder has not been configured, then the software automatically saves the converted files in the same location as the source files.

9. If the **Use a single output file** option has been selected, then type a **File name** and click **Save**.

Note: If the **Use a single output file** option has not been selected, then each converted file is automatically given the same name as the source file.

Convert Data using the Command Line

- 1. Open the Command Prompt window.
- 2. Type the following command and then press Enter:

<drive>:\"c:\Program Files(x86)\Keystone Converter\Keystone Converter.exe"

Figure 3-21 Command Prompt: Run the Executable



Tip! To view a list of available options, type <drive>:\"c:\Program Files(x86)\Keystone Converter\Keystone Converter.exe" and then press Enter

Figure 3-22 Software Options

👞 Command Prompt	
C:\>"c:\Program Files (x86)\Key	vstone Converter\Kevstone Converter.exe"
usage: convert-cli [OPTIONS] []	INPUT FTIFS]
-llistConverters	lists all available converters, then
1) 1150000000000	exits
-asessionAuditInail	Whites Audit Insil of conventer session to
a, sessionadien dii	an AnTMI file
gui lounchGUT	an Anine Tire.
-gui,iaulicitoti	the user con interact with
a sutput[i]a (ang)	AnTML sutput file name o g
-o,outputrile (arg)	Animi output file name, e.g.
	example.animi . Merges data from all
	input files into this output file.
-od,outputDirectory <arg></arg>	Output directory path, e.g.
	"c:\archive\animi". Produces one AnIML
	file per input file, replicating the input
	directory structure.
-i,index	Creates index files for all generated
	AnIML files.
<pre>-ta,trackAmountConverted</pre>	Track amount of converted data based on
	input files size. File is located at
	%User_profile%/convert-cli.
<pre>-id,inputDirectory <arg></arg></pre>	Input directory path, e.g.
	"c:\data\project1". Traverses the given
	directory to look for input files.
	If you use monitoring, you can specify
	multiple directories like
	"c:\data\project1;c:\data\project2"
-ds,disable-signature	Disable digital signature (ignore default
	signing key settings)
-log,logFile <arg></arg>	Path to the log file.
-eq,emptyProcessingQueue	Removes entries in processing queue from
	previous session / Starts with empty
	processing queue
-cconfigFile <arg></arg>	Load all parameters from a config file.
-k,kevstore <arg></arg>	Path to keystore to use, e.g.
,	"c:\archive\animl\kevstore.iks"
-kpkeystorePassword (arg)	Keystore password.
-eaentrvAlias (arg)	Unique alias that identifies the entry in
caj energiaras (arg)	the keystone
-onontryPassword (and)	Keystone entry password
-ep,entry-assword (arg/	Reystore entry password.
(./>	

Note: The -od and -o options cannot be used together. The -od option writes all of the files to a new folder, using the existing name plus animl as the extension. The -o options sets the filename for one new file. This file can include a complete folder if one did not exist originally.

Renew the Keystone Converter Software License

- 1. Obtain a new license file from SCIEX and then save it on the desktop.
- 2. Browse to C:\ProgramData\KeystoneConverter\license and then delete the keystone_license.lic file.
- 3. Click **Start > SCIEX Keystone > SCIEX Keystone Converter** to open the Keystone Converter Software.
- 4. Click Select.
- Browse to the Desktop, select the keystone converter license.lic file, and then click Open.
 The license selection dialog refreshes, showing the license file that was selected.
- 6. Click **Finish**.

The Keystone Converter Software opens.

View Converted wiff Files

A wiff file is the proprietary format for storage of data acquired by SCIEX mass spectrometers. The wiff file contains general information about the file, such as acquisition methods, batch, and device, as well as raw data.

Open a wiff.animl File

- 1. Click Start > SCIEX Keystone > SCIEX Keystone Viewer.
- 2. Click **File > Open**.

The Open dialog opens.

3. Browse to and select the appropriate wiff.animl file and then click **Open**.

Tip! Press the Shift key to select multiple wiff.animl files.

View the Experiment Workflow

1. In the Navigation pane, click **Experiments**.

The Experiment Workflow pane opens. By default the information is shown hierarchically.

Figure 4-1 Hierarchical View



Tip! (Optional) To view the information horizontally, click .

Figure 4-2 Horizontal View



- 2. Click an item to view the associated information.
 - If a sample is selected, then the corresponding sample is highlighted in the Navigation pane, and a new pane opens at the bottom of the window, showing the **Name** and the **Sample ID**.
 - If an MRM transition is selected, then the corresponding MRM entry is highlighted in the Navigation pane, and a new pane opens at the bottom of the window, showing the **Name** and **ID** of the MRM transition.

Figure 4-3 Example: MRM

Mix_batch_1.wift.3.arviml		
Sample 3 id=Sample 3 #39 Sample 4 id=Sample 4 #40	C Experiment Workflow 👗 📢	
- Cample 4 Machanyle 4 241	- XX #0: 210.2003	~
- Sample 5 id=Sample 5 #42	See the first of the first of the sec of	
- Sample 5 id-Sample 5 #43	The second s	
- Sample 6 id+Sample 6 #44		
- C Sample 6 id-Sample 6 #45		
- 3 Sample 7 id+Sample 7 #46		
- 🔂 Sample 7 id=Sample 7 #47	→ XIC #1: 271.29998	
- 🚺 Sample 8 id+Sample 8 #48	Mass Spectrum Time Trace To sum 2	
Sample 8 Id=Sample 8 #49		
B - Ixperiments	- Current	
- 0 #1-510 1: MRM (4 b anatora)	0000	
- • XIC #01 210.20001220703125/		
- • NL #12 271.2000/70200/37	570.1 Test Same #1 - STD 1: HRH (- Data Same Sci 2: 609.39996-	
0 11C #2 605.000044140625/2	Chromatography ID: 0 With Assa Spectrum Time Trace ID: sm-3	
- o TC (#1) id=tc=s5		
 #2 - STD 1: MRM (4 transitions) 	0.000 500	~
• X3C #0: 210.20001220703125/	Si Name: #1 - STD 1: MRM (4 transitions)	▼ □ ×
 O XIC #1: 271.29998779296875/ D XIC #1: 271.29998779296875/ 		Separation Monitoring
• XIC #2 609.3999633789062/F • XIC #2 619.418 60004414963870	separation monitoring 🔄 😰 🛄 👻	Method
0 70° / 870 id all and 11	Tame (m)	Samplers
 e #1 - STD 2: MRM (4 transitions) 	foet4	Origin
- • NIC #0: 210.20001220703125/	independent (x)	History
- • XIC #1: 271.29998779296875/		
• X3C #2: 609.3999633789062/1*		
- • X3C #3: 635.4000244140625/2		
- • TIC (#3) id=tic:es17	Vicus Data	
< >	A	
	·	

• If an XIC is selected, then the corresponding XIC entry is highlighted in the Navigation pane, and a new pane opens at the bottom of the window, showing the mass chromatogram of the selected XIC.

Mix_batch_1.wiff.3.anim1		
- Sample 3 id+Sample 3 #39	A set Deperiment Workflow 🔬 🤞	
- Sample 4 id+Sample 4 #41	P [™] 2 XIC #9: 210,20001	^
- Sample 5 id-Sample 5 #42	Alaor Spectrum Time Trace ID: srm-1	
- C Sample 5 id+Sample 5 #43		
- Sample 6 Id-Sample 6 #44		
- Sample 6 Id+Sample 6 #45		
Sample 7 Id+Sample 7 #47	Sector VIC at 177 Mana	
- Sample 8 id-Sample 8 #48	See Annual Contraction Traction The sec 2	
- 🗂 Sample 8 id+Sample 8 #49	The spectra inc in the second	
© •C Experiments	1000	
 e #1-STD 1: MRM (4 transition 	Color.	
 With etc. 271 20008 720 2068 71 		
x3C #2: 609.3999633789062/	STD 1 tell Sample Star Star Li MRM (Data Source Star 2 609.39996	
 w X3C #3: 635.4000244140625/ 	Ex STD 1 #1 American Spectrum Time Trace ID: srm-3	
- • TIC (#1) id=5c-es5		
 #2 - STD 1: MRM (4 transition) 		
 NC #0: 210.20001220703125 NC #1: 221.20008720306825 	25: Name: XIC #0: 230.20001225/03125/054.18789672851562 (#1)	×
 x3C #2: 609.3999633789062/ 	Hass Chromatogram 🔤 🌰 🗅 😥 🖏 Trit 🗁 X 🔍 🐨	ss Ovonatogram
- • X3C #3: 635.4000244140625/		Method
- • TIC (#2) id=tc:es11	1 1 1 1 1 1 1 1 1 1	Samples
 #3 - STD 2: MRM (4 transition) 	A.000	Origin
 NC #0: 210.20001220703125 NC #1: 221.20008720206825 	2000	History
→ X3C #2: 609.3999633789062/		
- • X3C #3: 635.4000244140625/	00 01 02 03 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9 3.0 3.1 Temponed	
- • TIC (#3) id=tic=es17	 Visual Data 	
< 3	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

Figure 4-4 Example: XIC #0 Visual Tab

3. (Optional) Click Data.

The pane at the bottom of the window refreshes, showing the **Time** (X-axis) and **Intensity** (Y-axis) values in table format.



Mix_batch_1.wiff.3.animl					- I de 💽
Sample 3 id-Sample 3 #39	+C Experiment Workflow 👗 🗠				
- Sample + id=Sample + #40			A XIC #0: 210,20001_		~
- Sample 5 id=Sample 5 #42			Mass Steventrum Time Trace 32: sym-1		
- C Sample 5 id-Sample 5 #43					
- Sample 6 id=Sample 6 #44					
- Sample 6 kd-Sample 6 #45					
- Sample 7 id+Sample 7 #46		~			
Sample 7 Id=Sample 7 #47		12 102 10	2 XIC #1: 271.29998		
Sample & Marcande & Ph		28	Mass Spectrum Time Trace 3D: srm-2		
		/	×		
 #1 - STD 1: MRM (4 transitions) 		DRASHAG			
- · · · · · · · · · · · · · · · · · · ·					
 	0 #1 - STD 1: HRH (-	Parts Francis	NIC #2: 609.39996		
- • XIC #2: 609.3999633789062/7	STD 1 Tell Sample Oronastoraphy ID: 0	- 1944 SOLICE)	Mass Spectrum Time Trace 3D: sym-3		
 AC #3: 635.400294340625/2 TTC (#1) MaterialS 	DI STD 1 #1				
#2 - STD 1: MEM (4 transitions)		Data San			Ψ.
 w X0C #0: 210.20001220703125/ 	Se Name: X3C #0: 210.20001220703125/164.18799672851562 (#1)		ID: sm-1		- 🗆 x
— • XDC #1: 271.29998779296875/				Marrie Ch	and the second second
 	Hass Chromatogram			M	wheel
 XIC #3: 635.4000244140625/2 	Time [nir]	Intensity [counts]			errou
 B) (B2) 10-00-0011 B) 21 - 570 2: MEM (4 transitional) 	foati4	foati-l		1	and and a second s
 x0C #0: 210.20001220703125/ 	independent (s)	dependent (y)		H	interv
• X0C #1: 271.29998779296875/	0.00002566666666666666666666666666666666		0.0000000000000 🔺		
- • XDC #2: 609.3999633789062/2	0.01036666666666666666666666666666666666		13.33333015441895		
• XIC #3: 635.4000244140625/2	0.0207000000000000000000000000000000000		0.0000000000000000000000000000000000000		
- • TIC (#3) k6=5c-es17	Veual Data				

View MRM Transition Information

Prerequisite Procedures

• Open a wiff.animl File.

1. In the Navigation pane, click the **MRM** transition to be viewed.

The pane at the right side of the window refreshes, showing the **Name** and the **ID** of the selected transition.

SCIEX Keystone AnIML Viewer			- 0	×
Pile Edit Window Heip				
Runitrazepam and Nordiazepam.wiff.5.ani	ml		- 6	×
🗄 🍒 Samples	Name: MRM (4 transitions)	ID: 0	▼ □	×
Vice 41 (VAVASCOS) Vice 41:275.1 (d=sm-1) Vice 41:276.2/140.2 (d=sm-2) Vice 41:276.2/140.2 (d=sm-3) Vice 42:314.2/68.1 (d=sm-4) Tice (d=bic-es5 Min(4 transitions) (d=6 Vice 41:276.2/140.2 (d=sm-4) Vice 42:314.2/258.1 (d=sm-4) Vice 42:314.2/258.1 (d=sm-4) Vice 42:314.2/258.1 (d=sm-4) Vice 41:276.2/140.2 (d=sm-4) Vice 41:271.2/140.2 (d=sm-4)	Separation Honitoring		History	
	Visual Data			0

Figure 4-6 Example MRM Transition: Separation Monitoring

Table 4-1 lcons

lcon	Name	Description
	Copy table data	Creates a copy of the table information and puts it on the computer clipboard.
1 7	Remove row	Removes the selected row from the table.
		Tip! Use the Ctrl or Shift key to select multiple rows.
		Changes made in the Viewer do not affect the actual file.

Table 4-1 Icons (continued)

lcon	Name	Description
	Configure visible columns	Opens a dialog that can be used to show or hide columns.
•	Actions — Export to Excel	Exports the information to a Microsoft Excel spreadsheet.

2. To view the details of the acquisition method associated with the selected MRM transition, under Separation Monitoring in the right panel, click **Method**.

Note: This information corresponds to the File Information available using the **Explore > Show > Show File Information** option in the Analyst[®] Software.

SCIEX Keystone AnIML Viewer				– 🗆 X
File Edit Window Help				
Open Repository Import Report About				
Flunitrazepam and Nordiazepam.wiff.5.a	niml			- # ×
🗉 🔬 Samples 📃 🔿	Name: MRM (4 transitions)	ID: 0		▼ 🗆 ×
□ • □ • □ • □ • □ • □ • □ • □ • □ • □ •	Method Information	р (Separation Monitoring
YIC =0: 321 2/275 1 kinema1			^	Method
- O XIC #1: 275.2/140.2 id=srm-2	Period			Sampler
- • XIC #2: 314.2/268.1 id=srm-3	Index:	0		Origin
- @ XIC #3: 271.2/140.2 id=srm-4	Duration:	174042.14600000002		History
- • TIC id=tic-es5	Cycles:	791		
 MRM (4 transitions) id=6 	Cycle Time:	220.0280000000002		
• XIC #0: 321.2/275.1 id=srm-7	Eventiments Des Curles			
 XIC #1: 2/6.2/140.2 id=sm-8 XIC #2: 214 2/268 1 id=sm 0 	Experiments Per Cycle:			
- e XIC #3: 271.2/140.2 id=srm-1	European t			
- O TIC id=tic-es11	Experiment			
 — MRM (4 transitions) id=12 	Indexi	0		
- @ XIC #0: 321.2/275.1 id=srm-1:	Polarity:	+		
- @ XIC #1: 276.2/140.2 id=srm-1-	Precursor Mass:	30.0		
- • XIC #2: 314.2/268.1 id=srm-1!	Q1 Resolution Flag:	Unit		
XIC #3: 271.2/140.2 id=srm-1/ A TIC id=tic-ec17	Q3 Resolution Flag	Link		
- e MRM (4 transitions) id=18				
- @ XIC #0: 321.2/275.1 id=srm-1!	Description:	New experiment		
- @ XIC #1: 276.2/140.2 id=srm-21	Scan Type:	MRM		
- @ XIC #2: 314.2/268.1 id=srm-2:				
- • XIC #3: 271.2/140.2 id=srm-2:	Ion Source Parameters			
— ● TIC id=tic-es23	Index:	0		
 MKM (4 transitions) id=24 MIC #0: 321 2/275 1 id=sem_21 	Name:	CUR		
- O XIC #1: 276.2/140.2 id=srm-2	Vertion	1		
- • XIC #2: 314.2/268.1 id=srm-2	Ter storing			
- @ XIC #3: 271.2/140.2 id=srm-2/ *	Start	25.0		
< >	Stop:	25.0	×	
				0

Figure 4-7 Example MRM Transition: Method

3. To view the details of the sample associated with the selected MRM transition, click **Samples**.

COEV Keysteen Asibili Viewer					
SCIEX Reystone Animit Viewer					
ile <u>E</u> dit <u>W</u> indow <u>H</u> elp					
→ → → → → → → → → → → → → → → → → → →					
Open Repository Import Report About					
Flunitrazepam and Nordiazepam.wiff.5.animi	(4)		1	(
a simples	Se Name: MRM (4	transitions)		ID: 18	▼ □ ×
O MPM (4 transitions) id=0					Separation Monitoring
● XIC #0: 321.2/275.1 id=srm-1	Role	Sample ID	Sample Name	Purpose	Method
- • XIC #1: 276.2/140.2 id=srm-2	Test Sample	Std 1	Std 1	consumed	Samples
- • XIC #2: 314.2/268.1 id=srm-3					Origin
- • XIC #3: 271.2/140.2 id=srm-4					History
- • TIC id=tic-es5					1 1000 7
 — MRM (4 transitions) id=6 					
- XIC #0: 321.2/275.1 id=srm-7					
- • XIC #1: 276.2/140.2 id=srm-8					
—					
- • XIC #3: 271.2/140.2 id=srm-1(
- O TIC id=tic-es11					
 — MRM (4 transitions) id=12 					
- • XIC #0: 321.2/275.1 id=srm-1:					
- • XIC #1: 276.2/140.2 id=srm-1					
—					
- • XIC #3: 271.2/140.2 id=srm-1/					
- O TIC IG=bc-es17					
→ XIC #0: 321.2/275.1 Id=sm-1: → VIC #1: 220 2/140 2 id=sm 2/					
● XIC #1: 2/6.2/140.2 Id=srm-2					
 XIC #2: 314.2/268.1 IG=srm-2. XIC #2: 321.2/140.2 id=srm-2. 					
• AlC =3: 2/1.2/19.2 ru=sfm+2.					
A MPM (4 transitions) id=24					
- e XIC #0: 321.2/275.1 id=erm-2*					
- • XIC #1: 276.2/140.2 id=grm-2					
- • XIC #2: 314.2/268.1 id=srm-2					
- @ XIC #3: 271.2/140.2 id=srm-2i *					
< >					

Figure 4-8 Example MRM Transition: Samples

4. To view the details of the instrument and software used to acquire the data, as well as the user information, click **Origin**.

nitrazepam and Nordiazepam.wiff.5.ar							
Samples	niml E 🛞 Namer Ia	Did (d kronelkinge)			170- 40	_	
Experiments	· Constrainte: M	KM (4 transitions)			10: 18		
 MRM (4 transitions) id=0 	Techniques a	and Extensions:				Separat	on Monitorin
 NIC #0: 321.2/275.1 id=srm-1 						N	lethod
- • XIC #1: 2/6.2/140.2 id=srm-2	Name		Туре		URL	S	amples
- • XIC #3: 271.2/140.2 id=srm-4	Chromatograpi	hy	Technique Definition	n	http://techniques.animl.org/chrom	4	Ungin
O TIC id=tic-es5							story
 MRM (4 transitions) id=6 	Device/Instr	ument:		Author:			
• XIC #0: 321.2/275.1 id=srm-7	Identifier:			Name:			
 XIC #1: 276.2/140.2 id=srm-8 	Manufacturar	SCIEV		Affiation			
• XIC #2: 314.2/268.1 id=srm-9	- Charlotta Ch	Joines .					
• • XIC #3: 271.2/140.2 id=srm-11	Model Name:	4000 Q TRAP		Role:			
MRM (4 transitions) id=12	Serial No:	U0050212PT		Location:		1	
XIC #0: 321.2/275.1 id=srm-1:							
● XIC #1: 276.2/140.2 id=srm-1	Firmware:			Phone:			
• XIC #2: 314.2/268.1 id=srm-1!	Software:			EMail:		1	
• XIC #3: 271.2/140.2 id=srm-1t	Manufacturer	SCTEV.		Type: (Human	1	
TIC id=tic-es17	Handracturer.	DOLEA		.,,	2		
WIM (4 transitions) interes	Name:	Analyst		9	Software		
• XIC #1: 276.2/140.2 id=srm-2	Version:	Analyst 1.5		() Device		
XIC #2: 314.2/268.1 id=srm-2							
● XIC #3: 271.2/140.2 id=srm-2:							
 TIC id=tic-es23 							
 MRM (4 transitions) id=24 							
–							

Figure 4-9 Example MRM Transition: Origin

5. To view the date and time that the sample was acquired, click **History**.



Figure 4-10 Example MRM Transition: History

View Extracted Ion Chromatogram (XIC) Information

Prerequisite Procedures

- Open a wiff.animl File.
- 1. In the Navigation pane, click the **XIC** to be viewed.

The pane at the right side of the window refreshes, showing the **Name**, **ID**, and **Mass Chromatogram** for the selected XIC.



Figure 4-11 Example: XIC #0 Visual Tab

Table 4-2 lcons

lcon	Name	Description
	Export image	Exports the image to a Portable Network Graphic (png) file.
4	Print	Prints the chromatogram to a selected printer.
	Copy image	Creates a copy of the image and puts it on the computer clipboard.
~	Add to Visualization	Adds the chromatogram to a visualization graph. Refer to Create a Visualization Graph.
Fit	Scale to fit	Returns a zoomed chromatogram to the original size.
K K X	Scale to fit x axis	Resizes the chromatogram to span the full X-axis.

lcon	Name	Description
∑ Y	Scale to fit y axis	Resizes the chromatogram to span the full Y-axis.
	Configure visible series	Reorders or hides columns. Refer to Configure Visible Series or Columns.
×	Format plot	Sets the formats of the plots. Refer to Set Chart Properties.
•	Export to Excel	Exports the Time and Intensity values for the chromatogram to a Microsoft Excel spreadsheet.

2. Click the **Data** tab to view the **Time**, in minutes, of each peak apex and the **Intensity**, in counts per second, of each peak, in table format.

SCIEX Keystone AnIML Viewer File Edit Window Help		-		×
Copen Repository Import Report About				
Flunitrazepam and Nordiazepam.wiff.5.an	iml			×
🗄 🔬 Samples 📃 🔿	Name: XIC #0: 321.2/275.1 ID: srm-19		-	= x
Kperiments WRM (4 transitions) id=0	Mass Chromatogram	Mac	ss Chromate	ogram
AIC #0: 321.2/2/5.1 id=srm-1 O XIC #1: 276.2/140.2 id=srm-2	Time [min] Intensity [counts]		Sampler	
- @ XIC #2: 314.2/268.1 id=srm-3	float64 float64		Origin	
- • XIC #3: 271.2/140.2 id=srm-4	independent (x) dependent (y)		History	
- • TIC id=tic-es5	0.0000166666666666667	0.0 ^		
 MRM (4 transitions) id=6 	0.0036833333333330 2	0.0		
- • XIC #0: 321.2/275.1 id=srm-7	0.00735000000000000000000000000000000000	3.0		
• VIC #1: 2/6.2/140.2 id=srm-8	0.01101666666666666	3.0		
Alc #2: 314.2/200.1 Id=smi ⁻⁹ O XIC #3: 271.2/140.2 id=sm-1/	0.01470000000000000000000000000000000000	0.0		
- O TIC id=tic-es11	0.0183666666666666666666666666666666666666	0.0		
 — MRM (4 transitions) id=12 	0.0220333333333320 2	0.0		
- • XIC #0: 321.2/275.1 id=srm-1:	0.02570000000000000000000000000000000000	0.0		
- • XIC #1: 276.2/140.2 id=srm-1-	0.02936666666666666	0.0		
- • XIC #2: 314.2/268.1 id=srm-1!	0.03303333333333300	0.0		
- • XIC #3: 271.2/140.2 id=srm-1t	0.03670000000000000000000000000000000000	0.0		
- • TIC id=tc-es17	0.04036666666666666666666666666666666666	0.0		
 MRM (4 transitions) id=18 	0.04403333333333340 2	0.0		
	0.0477166666666666640	0.0		
→ XIC #1: 2/6.2/140.2 id=srm-21	0.05138333333333360	0.0		
→ XIC #2: 314.2/200.1 id=sim-2.	0.0550500000000000000000000000000000000	0.0		
- O TIC id=tic=es23	0.0587166666666666666700	0.0		
 MRM (4 transitions) id=24 	0.06238333333333300	0.0		
- @ XIC #0: 321.2/275.1 id=srm-2!	0.0660500000000000000000000000000000000	0.0		
- XIC #1: 276.2/140.2 id=srm-2t	0.069716666666666600	0.0		
- • XIC #2: 314.2/268.1 id=srm-2.		· ·		
- ● XIC #3: 271.2/140.2 id=srm-21 ♥	Visual Data			
c >	A.V.			
				0

Figure 4-12 Example: XIC #0 Data Tab

lcon	Name	Description
	Copy table data	Creates a copy of the table information and puts it on the computer clipboard.
.	Remove row	Removes the selected row from the table.
		Tip! Use the Ctrl or Shift key to select multiple rows.
	Configure visible columns	Refer to Configure Visible Series or Columns.
•	Actions — Export to Excel	Exports the Time and Intensity values for the chromatogram to a Microsoft Excel spreadsheet.

3. Click **Method** to view the details of the MRM transition.

a SCIEA Reystone AnIML Viewer e <u>E</u> dit <u>W</u> indow <u>H</u> elp			- 0 ×
Deen Repository Import Report Abo	est.		
Flunitrazepam and Nordiazepam.wiff	f.5.animl		- @ -
Comparison (Comparison) Comparison (Comparison)	Ame: XIC #0: 321.2/275.1 Method Information SRM Transition ID: Expected RT: Q1 Mass: Q3 Mass: RT Window:	Flunkrazepam.15 0.0 321.2 275.1 0.0	Mass Chromatogram Method Samples Origin History
	9 M 1- 1- 1- 12 M		
 NRC directory id=18 NRC #0:321.2(275.1 id=smr-) NRC #0:321.2(275.1 id=smr-) NRC #1:226.2(140.2 id=smr-) NRC #2:314.2(268.1 id=smr-) NRC #3:211.2(140.2 id=smr-) TRC id=ic:es13 MRM (4 transitions) id=24 	11 21 22 22		
 XIC #0: 321.2/275.1 id=smr-2 XIC #1: 276.2/140.2 id=smr-2 XIC #2: 314.2/268.1 id=smr-2 XIC #3: 271.2/140.2 id=smr-2 	22 22 21 21		

Figure 4-13 Example: XIC #0 Method

4. Click **Samples** to view the details of the sample associated with the XIC.

SCIEX Keystone AnIML Viewer					- 🗆 X
Eile Edit Window Help					
Flunitrazepam and Nordiazepam.wiff.5.ar	niml				- @ X
🗄 🔬 Samples 🔥	Name: XIC #0	: 321.2/275.1		ID: srm-1	▼ □ ×
□ • C Experiments	7 2005		1		Mars Channels and
MRM (4 transitions) id=0	Role	Sample ID	Sample Name	Purpose	Mathad
0 XIC #1: 276 2/140 2 id=cm-2		and the second	and the second	· · · · · · · · · · · · · · · · · · ·	Camping
- e XIC #2: 314.2/268.1 id=srm-3					Origin
- • XIC #3: 271.2/140.2 id=srm-4					Ungn
- O TIC id=tic-es5					Pistory
 MRM (4 transitions) id=6 					
- • XIC #0: 321.2/275.1 id=srm-7					
- • XIC #1: 276.2/140.2 id=srm-8					
- • XIC #2: 314.2/268.1 id=srm-9					
- • XIC #3: 271.2/140.2 id=srm-1(
- • TIC id=tic-es11					
 — MRM (4 transitions) id=12 					
— • XIC #0: 321.2/275.1 id=srm-1:					
- • XIC #1: 276.2/140.2 id=srm-1-					
—					
- • XIC #3: 271.2/140.2 id=srm-16					
- • TIC id=tc-es17					
- • MRM (4 transitions) Id=18					
→ VIC #1: 321.2/275.1 Id=srm-1:					
→ XIC #1: 2/6.2/140.2 Id=srm-21					
→ AlC #2: 314.2/268.1 10=sim+2.					
- O TIC idatic-es23					
- MRM (4 transitions) id=24					
- • XIC #0: 321.2/275.1 jd=trm-2*					
 NIC #1: 276.2/140.2 id=srm-2t 					
- @ XIC #2: 314.2/268.1 id=srm-2					
- • XIC #3: 271.2/140.2 id=srm-21 *					
< >					

Figure 4-14 Example: XIC #0 Samples

5. Click **Origin** to view the details of the instrument and software used to acquire the data, as well as the user information.

n Repository Import Report About								
initrazepam and Nordiazepam.wiff.5.anir	nl				1		-	- 6
* Experiments	Se Name: XI	C #0: 321.2/275.1			ID:	srm-1		
	Techniques a	and Extensions:					Mass C	hromatog 4ethod
- • XIC #1: 276.2/140.2 id=srm-2	Name		Type			URL	S	amples
- • XIC #2: 314.2/268.1 id=srm-3	Mass Spectrum	Time Trace	Technique Definition	1	•	http://techniques.animl.org/ms/curr		Origin
- • XIC #3: 271.2/140.2 id=srm-4							ł	fistory
TIC id=tic-es5 MOM (4 breactions) id=5	Device/Instr	ument:		Author:				
 MKM (4 transitions) Id=6 VIC #0: 321 2/275 1 kd arms/7 	Identifiers			Name				
- • XIC #1: 276.2/140.2 id=srm-8	toenoner:			Name:				
- • XIC #2: 314.2/268.1 id=srm-9	Manufacturer:	SCIEX		Affliation:				
- • XIC #3: 271.2/140.2 id=srm-11	Model Name:	4000 O TRAP		Role:				
- • TIC id=tic-es11	Proder redires	1000 Q 1104		nores (
 — MRM (4 transitions) id=12 	Serial No:	U0050212PT		Location:				
- • XIC #0: 321.2/275.1 id=srm-1:	Firmware:			Phone:			1	
- • XIC #1: 276.2/140.2 id=srm-1								
 AlC #2: 314.2/268.1 id=srm+1: XIC #2: 271 2/140 2 id=srm-1/ 	Software:			EMail:				
- e TIC id=tic-es17	Manufacturer:	SCIEX		Type:	OHur	nan		
 MRM (4 transitions) id=18 	News	Analist			Sof	tware		
- • XIC #0: 321.2/275.1 id=srm-1!	Name:	Hendryst			~ n -	100		
- • XIC #1: 276.2/140.2 id=srm-2(Version:	Analyst 1.5			Ober	nce		
 O XIC #2: 314.2/268.1 id=srm-2. 								
 — — XIC #3: 271.2/140.2 id=srm-2: 								
- • TIC id=bc-es23								
 MRM (4 transitions) Id=24 NIC #0: 221 2/275 1 id=stm_21 								
- O XIC #1: 276.2/140.2 id=srm-2:								
· new - at arrows 19012 10-Still*21								

Figure 4-15 Example: XIC #0 Origin

6. Click **History** to view the date and time that the sample was acquired.



Figure 4-16 Example: XIC #0 History

Create a Visualization Graph

Prerequisite Procedures

- Open a wiff.animl File.
- 1. In the Navigation pane, select two or more XICs to be viewed.

The pane at the right side of the window refreshes, showing a mass chromatogram pane for each XIC selected.



Figure 4-17 Selected XICs

2. Click **Add to Visualization** (^[]]) in the first mass chromatogram pane to create the initial visualization graph.



Figure 4-18 Initial Visualization Graph

Table 4-4 Icons

lcon	Name	Description
	Export image	Exports the image to a Portable Network Graphic (png) file.
4	Print	Prints the chromatogram to a selected printer.
	Copy image	Creates a copy of the image and puts it on the computer clipboard.
🔀 Fit	Scale to fit	Returns a zoomed chromatogram to the original size.
K≫ X	Scale to fit x axis	Resizes the chromatogram to span the full X-axis.
∑ Y	Scale to fit y axis	Resizes the chromatogram to span the full Y-axis.
	Overlay	Combines all of the selected chromatograms in one pane. The chromatograms are shown in the default Overlay format, each one in a different color. Refer to Figure 4-19.
—	Tile	Refer to Figure 4-20.
_	Legend	Refer to Figure 4-22.
_	Group	Refer to Figure 4-23.

Table 4-4 Icons (continued)
-------------------	------------

lcon	Name	Description
—	Staggered	Refer to Figure 4-24.
—	Edit	Refer to Figure 4-26.
_	Clear	Removes all of the information from the visualization graph.
×	Format plot	Refer to Set Chart Properties.

3. Click in each mass chromatogram pane to add the required XICs to the visualization graph.

The selected XICs are shown in the default **Overlay** format.



Figure 4-19 Visualization Graph: Overlay Format

4. Click **Tile** to show all of the selected chromatograms, stacked in the pane.



Figure 4-20 Visualization Graph: Tile Format

5. Click **Legend** to add an abbreviated name for the XIC to the bottom of the pane in the overlay view or to add the name of the XIC to each pane in the tiled view.



Figure 4-21 Legend: Overlay View

Tip! Mover the cursor over the legend entry to view the name of the associated XIC.



Figure 4-22 Legend: Tile View

6. Click **Group** to show all of the selected chromatograms.



Figure 4-23 Group View

7. Click **Staggered** to combine all of the selected chromatograms in one pane, in a stacked view.

Note: The Y-axis for each chromatogram is shown, at consistent intervals.



Figure 4-24 Staggered View

- 8. Type a **Name** in the field provided and then click **OK**.
- 9. Click **Edit**.



Figure 4-25 Edit View

- 10. Right-click the name of an XIC and do one of the following:
 - Click **Remove** to delete the selected XIC from the view.

• Click **Configuration** and then change the settings:

Figure 4-26 Settings Dialog

🛓 Settings	×
Settings Configure Plot	
Line Type:	v
Shape Type:	~
Color:	×
	OK Cancel

- a. Change the type of the line used to draw the chromatogram.
- b. Change the shape of the data points on the chromatogram.
- c. Change the color of the line used to draw the chromatogram.
- d. Click OK.

Configure Visible Series or Columns

1. Click Configure Visible Columns (\square).

K View Configuration	×
Visible Series Ime Intensity	
Filter: Select All Clear	OK Cancel

Figure 4-27 View Configuration Dialog

2. (Optional) Clear the **Intensity** check box to hide the **Intensity** column on the Data tab.

Note: The Time column cannot be hidden.

3. Click **OK**.

Set Chart Properties

Prerequisites

One of the following panes must be open:

- An XIC Mass Chromatogram pane. Refer to View Extracted Ion Chromatogram (XIC) Information.
- A visualization chart. Refer to Create a Visualization Graph.
- A TIC Mass Chromatogram pane. Refer to View Total Ion Chromatogram (TIC) Information
- •
- 1. Click Format plot (³⁶).

Chart Properties	;	×
Title Plot O	ther	
General: Show Title:		
Text: Font:	Title SansSerif.bold, 12	Select
Color:		Select
	OK Cancel	

Figure 4-28 Chart Properties: Title Tab

- 2. Click the **Show Title** check box and then type a title for the chromatogram in the **Text** field.
- 3. Click **Select** to the right of **Font**.

Figure 4-29 Font Selection Dialog



- 4. Select the **Font**, **Size**, and **Attributes** and then click **OK**.
- 5. Click **Select** to the right of **Color**.

Swatches
HSV

Swatches

HSV

HSV

Recent:

Figure 4-30 Title Color Dialog

- 6. Select the appropriate color on the Swatches tab and then click **OK**.
- 7. Click the **Plot** tab.

The tab opens to the default Domain Axis tab.

Chart Properties	\times
Title Plot Other	_
Domain Axis Appearance	
General:	
Label: Time [min]	
Font: Dialog.plain, 11 Select	
Paint: Select	
Other	
Range lickUnit	
Show tick labels	
Tick label font: Dialog.plain, 11 Select	
Show tick marks	
OK Cancel	

Figure 4-31 Chart Properties: Domain Access

- 8. In the **General** section, type the new **Label** for the X-axis.
- 9. Click **Select** to the right of **Font**.

Refer to Figure 4-29.

- 10. Select the **Font**, **Size**, and **Attributes** and then click **OK**.
- 11. Click **Select** to the right of **Paint**.



Figure 4-32 Label Color Dialog

- 12. Select the appropriate color on the **Swatches** tab and then click **OK**.
- 13. In the **Other** section, on the Ticks tab:

Figure 4-33 Other Section: Ticks Tab



• Select the Show tick labels check box to show the units of measure on the X-axis.

Note: This option is selected by default.

- Clear the **Show tick labels** check box to remove the units of measure from the X-axis.
- Click Select to the right of Font. Refer to Figure 4-29. Select the Font, Size, and Attributes and then click OK.

• Select the **Show tick marks** check box to show the unit of measure indicators on the bottom of the X-axis.

Note: This option is selected by default.

- Clear the **Show tick marks** check box to remove the unit of measure indicators from the bottom of the X-axis.
- 14. In the **Other** section, on the Range tab, set the options:

Figure 4-34 Other Section: Range Tab

ther -			
Ticks	Range	TickUnit	
			Auto-adjust range:
Minimu	ım range	value:	0.0
Maxim	um range	value:	3.1360691666666667

 Select the Auto-adjust range check box to enable the software to automatically set the Minimum range value for the units of measure on the X-axis to 0.0 and to set the Maximum range value to 3.1360691666666667.

Note: This option is selected by default.

- Clear the Auto-adjust range check box to manually adjust the minimum and maximum range values for the units of measure on the X-axis. Type the appropriate values in the Minimum range value and Maximum range value fields provided and then click OK.
- 15. In the **Other** section, on the TickUnit tab, set the options:

Figure 4-35 Other Section: TickUnit Tab

Other -		
Ticks	Range	TickUnit
		Auto-Selection of TickUnit
TickUnit value		0.1

• Select the **Auto-Selection of TickUnit** check box to enable the software to automatically set the **TickUnit value** to 0.1 to increment each unit of measure on the X-axis by 0.1.

Note: This option is selected by default.

Keystone Software 54 / 69

- Clear the Auto-Selection of TickUnit check box to manually adjust the incremental amount for the units of measure on the X-axis. Type the appropriate value in the TickUnit value field provided and then click OK.
- 16. Click the **Appearance** tab.

Figure 4-36 Plot Tab: Appearance

Chart Properties	×
Title Plot Other	
Combined_Domain_XYPlot:	
Domain Axis Appearance	
Outline stroke:	
Outline paint: Select	
Background paint: Select	
Orientation: Vertical 🗸	
OK Cancel	

17. Click **Select** to the right of **Outline stroke**.

Figure 4-37 Stroke Selection Dialog

S	troke Selection	×
	•	• ~
	OK Cancel	

18. Select the appropriate stroke type from the options provided and then click **OK**.

Figure 4-38 Stroke Type Options



19. Click **Select** to the right of **Outline point**.

Suatches HSV HSL RgB CMYK Preview Preview Sample Text Sample Text

Figure 4-39 Outline Color Dialog

- 20. Select the appropriate color on the Swatches tab and then click **OK**.
- 21. Click **Select** to the right of **Background paint**.



Figure 4-40 Background Color Dialog

- 22. Select the appropriate color on the **Swatches** tab and then click **OK**.
- 23. Select **Horizontal** to the right of **Outline stroke** and then click **OK**.

The Time axis is shown vertically and the Intensity axis is shown horizontally.

Figure 4-41 Horizontal Orientation



User Guide RUO-IDV-05-10456-A

24. Click the **Other** tab.

Figure 4-42 Other Tab

Chart Properties		×
Title Plot Other General: ☑ Draw anti-aliase	:d	
Background paint:		Select
Series Paint:	No editor implemented	Edit
Series Stroke:	No editor implemented	Edit
Series Outline Paint:	No editor implemented	Edit
Series Outline Stroke	e: No editor implemented	Edit
ľ	OK Cancel	

- 25. Do one of the following:
 - Select the **Draw anti-aliased** check box to create a smoother version of the graph.
 - Clear the **Draw anti-aliased** check box to revert the graph.
- 26. Click **Select** to the right of **Background paint**. Refer to Figure 4-40.
- 27. Select the appropriate color on the **Swatches** tab and then click **OK**.

View Converted rdb Files

An rdb file is the proprietary format for the Results Table generated by the Analyst[®] Software. The Results Table is a report of each compound or potential metabolite found in a sample, presented in a table format.

Open an rdb.animl File

1. Click **File > Open**.

The Open dialog opens.

2. Browse to and select the appropriate rdb.animl file and then click **Open**.

Tip! Hold down the Shift key to select multiple rdb.animl files.

View a Results Table

Prerequisite Procedures

- Open an rdb.animl File.
- 1. In the Navigation pane, click the **Results Table** to be viewed.

The pane at the right side of the window refreshes, showing the information for the selected Results Table. Only the Data tab is accessible.

Figure 4-43 Example Results Table

QC3-28 of 49 Id=QC3 #28 A OC2-29 of 49 Id=QC2 #29	🛔 😤 Name: Results T	able			ID:	resultstable-0				-
5TD 0 - 30 of 49 Id=STD 0 #30	Results Table	Image: Image							R	es.
BLANK - 32 of 49 Id-BLANK #32 BLANK - 33 of 49 Id-BLANK #33 Samble 1 - 34 of 49 Id-BLANK #33	Wiff Sample Index int32 dependent (y)	Results Table Sample Index int32 dependent (y)	Sample Name string dependent (y)	Sample ID string dependent (y)	Analyte ID int32 dependent (y)	Set Number string dependent (y)	Analyte Q1 Mass foat64 dependent (y)	Analyte Q3 Hass foati4 dependent (y)		Sa
Sample 1 - 35 of 49 id =Sample 1 #35	0		STD 1		0	0	210.20001220703	164.187897	A	-
Sample 2 - 36 of 49 id =Sample 2 #36	0		STD 1		1	0	271.29998779296	91.146431		
Sample 2 - 37 of 49 id=Sample 2 #37	0		STD 1		2	0	609.39996337890	195.038895		
Sample 3 - 38 of 49 id =Sample 3 #38	1	1	STD 1		0	0	210.20001220703	164, 187897		
Sample 3 - 39 of 49 id=Sample 3 #39	1	1	STD 1		1	0	271.29998779296	91.146431		
Sample 4 - 40 of 49 Id=Sample 4 #40	1	1	STD 1		2	0	609.39996337890	195.038895		
Sample 4 - 41 of 49 Id -Sample 4 #41	2		STD 2		0	0	210.20001220703	164, 187897		
Sample 5 + 42 of 49 IO+Sample 5 # 42	2		STD 2			0	271,29998779296	91,146431		
Sample 6 - 44 of 49 MileSample 5 # 44	2		STD 2		2	0	609.39996337890	195.038995		
Sample 6 - 45 of 49 id -Sample 6 #45	3		STD 2		0	0	210.20001220703	164, 187897		
Sample 7 - 46 of 49 id=Sample 7 #46			STD 2			0	271.29998779296	91,146431		
Sample 7 - 47 of 49 id=Sample 7 #47			STD 2			6	609.39996337890	195.038995		
Sample 8 - 48 of 49 Id -Sample 8 #48			STD 1		-	0	210 20001220203	164 187907		
Sample 8 - 49 of 49 id=Sample 8 #49			STD 1			6	271 20000770206	91.146431		
xperiments			STD 3			Č.	600 30006337800	105 018805		
Results Table id-resultstable-0			CTD 3		-	5	210 2000/220200	164 10/2007		
 Calbration: minoxidol id=calbration1 			1000			-	210.20001220703	207.107037		
 Calbratoric tobutamde id=calbration2 		1	spin a			, o	271.27798779296	a1 140431	*	
 Calbration: reservine id=calbration3 	< .							,		

Table 4-5 Icons

lcon	Name	Description
	Copy table data	Creates a copy of the table information and puts it on the computer clipboard.
1	Remove row	Removes the selected row from the table.
		Tip! Use the Ctrl or Shift key to select multiple rows.

Table 4-5 lcons (continued)

lcon	Name	Description
	Configure visible columns	Refer to Configure Visible Columns.
•	Actions — Export to Excel	Exports the information to a Microsoft Excel spreadsheet. Hidden columns are exported.

- 2. Click **Method** to view the method information.
- 3. Click **Samples** to view the details of the samples associated with the Results Table.
- 4. Click **Origin** to view the details of the instrument and software used to acquire the data, as well as the user information.
- 5. Click **History** to view the date and time that the Results Table was generated.

Configure Visible Columns

Columns in the Results Table can be reordered or hidden. The order of columns does not persist from session to session. In addition, if columns are hidden after they have been reordered, then the order of the shown columns reverts back to the original order.

1. To hide columns, click **Configure Visible Columns** (\square).

Figure 4-44 View Configuration Dialog

S View Configuration	×
Visible Series	
Wiff Sample Index	^
Results Table Sample Index	
Sample Name	
Sample ID	
Analyte ID	
Set Number	
Analyte Q1 Mass	
Analyte Q3 Mass	
✓ IS Q1 Mass	
IS Q3 Mass	
Dilution Factor	
I File Name	
Weight To Volume	~
Filter:	
Select All Clear OK	Cancel

2. (Optional) Clear the check box beside each column to be hidden.

Tip! Click **Clear** to clear all of the check boxes. Use the **Filter** field to minimize the number of columns shown for selection.

- 3. Click **OK**.
- 4. To reorder columns, click the column header and drag the column to the new location.

View Converted Audit Trail Files

Each workstation has one Instrument Audit Trail. It records events such as additions or replacements to the mass calibration resolution tables, system configuration changes, security events, and entries in the Instrument Maintenance Log. For computers not directly connected to a mass spectrometer, the Instrument Audit Trail records only security events. The Instrument Audit Record has a file extension of atd.

Each project has a Project Audit Trail. It records events such as the creation, modification, and deletion of projects, data, quantitation methods, acquisition methods, batch, tuning, Results Table, and report template files, as well as module opening, closing, and printing events. The Project Audit Record has a file extension of atd.

The Audit Trail is comprised of three modules: Instrument, Project, and Results Table Audit Trail. The Instrument Audit Trail captures user log on, log off, settings changes and so on, and is stored as an atd file in the Project Information folder for the API Instrument project. The Analyst[®] Software Project Audit Trail captures module access, file creation, printing, and so on, and is stored as an atd file in the Project Information folder of the project. The Results Table Audit Trail capture events related to the creation and modification of the Results Table and is stored with the Results Table.

When the Instrument and Project Audit Trails reach 1000 entries the Audit Trail is archived as a time and date-stamped ata file. The Results Table Audit Trail has no limit on the number of entries.

Both ata and atd Audit Trail files can be converted to the AnIML format.

Open an ata.animl or atd.animl File

1. Click **File > Open**.

The Open dialog opens.

2. Browse to and select the appropriate ata.animl or atd.animl file and then click **Open**.

Tip! Hold the Shift key to select multiple ata.animl or atd.animl files.

View Total Ion Chromatogram (TIC) Information

Prerequisite Procedures

• Open a wiff.animl File.

1. In the Navigation pane, click the **TIC** to be viewed.

The pane at the right side of the window refreshes, showing the **Name**, **ID**, and **Mass Chromatogram** for the selected TIC.



Figure 4-45 Example TIC – Visual Tab

Table 4-6 Icons

lcon	Name	Description
	Export image	Exports the image to a Portable Network Graphic (png) file.
a	Print	Prints the chromatogram to a selected printer.
	Copy image	Creates a copy of the image and places it on the computer clipboard.
~	Add to Visualization	Adds the chromatogram to a visualization graph. Refer to Create a Visualization Graph.

lcon	Name	Description
Fit	Scale to fit	Returns a zoomed chromatogram to the original size.
K≯ X	Scale to fit x axis	Resizes the chromatogram to span the full X-axis.
	Scale to fit y axis	Resizes the chromatogram to span the full Y-axis.
	Configure visible series	Refer to Configure Visible Series or Columns.
×	Format plot	Refer to Set Chart Properties.
•	Export to Excel	Exports the Time and Intensity values for the chromatogram to a Microsoft Excel spreadsheet.

Table 4-6 Icons (continued)

2. Click the **Data** tab to view the **Time**, in minutes, of each peak apex and the **Intensity**, in counts per second, of each peak, in table format.

Figure 4-46 Example TIC - Data Tab

SCIEX Keystone AnIML Viewer			– 🗆 X
File Edit Window Help			
Deen Repository Import Report About			
Mix_batch_1.wiff.animl			- 2 💌
Samples A Second	Name: TIC	ID: tc-es5	▼ □ X
 MRM (4 transitions) id=0 	Mass Chromatogram 🕞 👔 🛄 🔻		Mass Chromatogram
- • XIC #0: 210.20001220703125/	Time [min]	Intensity (counts)	Method
- • XIC #1: 271.29998779296875/	floati4	Roati4	Origin
- • XIC #2:609.3999633/89062/1 - • XIC #3:635.4000244140625/2	independent (x)	dependent (y)	History
- 0 TC =3: 633.400244140623/2	0.000016666666666666666	53.33333333333333	T REFLOR Y
- • MRM (4 transitions) id=6	0.010366666666666666666	53.33333333333333	
A XIC #0: 210.20001220703125/	0.0207000000000000000000000000000000000	53.3333333333333	
XIC #1: 271.29998779296875/	0.031033333333333333333	40.000000000000000000000000000000000000	
- • XIC #2: 609.3999633789062/1	0.0413666666666666666700	73.333333333333340	
- • XIC #3: 635.4000244140625/2	0.05170000000000000000000000000000000000	80.000000000000000000000000000000000000	
- • TIC id=tic-es11	0.0620333333333333360	73.3333333333333333	
 MRM (4 transitions) id=12 	0.07236666666666666	66.6666666666666670	
 — XIC #0: 210.20001220703125/ 	0.08270000000000000000000000000000000000	40.000000000000000000000000000000000000	
—	0.0930333333333333300	33.33333333333336	
—	0.103366666666666666	46.666666666666666	
- • XIC #3: 635.4000244140625/2	0.11370000000000000000000000000000000000	60.000000000000000000000000000000000000	
- • TIC id=tic-es17	0.124033333333333333333333333	73.3333333333333340	
 — MRM (4 transitions) id=18 	0.134366666666666666666	20.000000000000000000000000000000000000	
- ● XIC #0: 210.20001220703125/		••••••••	1
- e XIC #1: 271.29998779296875/ *	Visual Data		
. /			

Table 4-7 Icons

lcon	Name	Description
	Copy table data	Creates a copy of the table information and places it on the computer clipboard.
	Remove row	Removes the selected row from the table. Use the Ctrl or Shift key to select multiple rows.
	Configure visible columns	Refer to Configure Visible Series or Columns.
•	Actions — Export to Excel	Exports the Time and Intensity values for the chromatogram to a Microsoft Excel spreadsheet.

3. Click **Method** to view the details of the method associated with the TIC.

Figure 4-47 Example TIC – Method

SCIEX Keystone AnIML Viewer	– D X
File Edit Window Help	
Cpen Repository Import Report About	
B Mix_batch_1.wiff.animI	
Bit mail Samples A mate: TIC ● ≪Experiments A mate: TIC ● ≪Experiments A mate: TIC ● × x1C = 0: 201.20001220703125/ ● × x1C = 201.20980779396875/ ● × x1C = 0: 201.20980779396875/ ● × x1C = 0: 201.2001220703125/ ● × x1C = 0: 201.2004140625/2 ● × x1C = 0: 201.20001220703125/ ● × x1C = 0: 201.2000122070703125/ ● × x1C = 0: 201.200012070703125/	D: toces5
- ● XIC #3: 635.4000244140625/2 - ● TIC id=bic=s17 - ● MRM (4 transitions) id=18 - ● XIC #1: 271.299987792968755 × <	

4. Click **Samples** to view the details of the sample associated with the XIC.

Figure	4-48	Exam	ole Tl	C –	Same	les
		-//		-	• • • · · · r	

SCIEX Keystone AnIML Viewer					– 🗆 🗙
File Edit Window Help					
Den Repository Import Report About					
Mix_batch_1.wiff.animl					- 4
🗉 🔬 Samples 📃 🔺	Name: TIC		ID: tic-es!	5	▼ □ ×
Experiments	1 2024				Mars Characteria
 — — MRM (4 transitions) id=0 	Role	Sample ID	Sample Name	Purpose	Mass Chromatogram
- • XIC #0: 210.20001220703125/		control to	and the second	· · · · · · · · · · · · · · · · · · ·	Samples
- • XIC #1: 2/1.29998//92968/5/					Origin
- e XIC #3: 635.4000244140625/2					History
- • TIC detrest					
- MRM (4 transitions) id=6					
- • XIC #0: 210.20001220703125/					1
- • XIC #1: 271.29998779296875/					
— • XIC #2: 609.3999633789062/1					
- • XIC #3: 635.4000244140625/2					
- • IIC Id=0c-es11					
XIC #0: 210 20001220703125/					
XIC #1: 271.29998779296875/					
XIC #2: 609.3999633789062/1					
- • XIC #3: 635.4000244140625/2					
- • TIC id=tic-es17					
 — MRM (4 transitions) id=18 					
- • XIC #0: 210.20001220703125/					
<pre>xit. ±11.771.799987797968750 *</pre>	L				1

5. Click **Origin** to view the details of the instrument and software used to acquire the data, as well as the user information.

SCIEX Keystone AnIML Viewer									
File Edit Window Help									
Copen Repository Import Report About									
Mix_batch_1.wiff.animl								- 6	×
Samples A	Name: TIC ID: 0c-es5						• (×	
	Techniques and Extensions:					Mass	Chromato Method	gram	
- • XIC #1: 271.29998779296875/	Name Type		Type			URL		Samples	
- • XIC #2: 609.3999633789062/1	Mass Chromat	ogram	Technique Definition			http://techniques.animl.org/ms/current/ms-ti	-	Origin	
- • XIC #3: 635.4000244140625/2								History	
- • TIC id=6c.es5	Device/Inst	rument:		Author:					
 MRM (4 transitions) id=6 	Identifier:		Name: SY		SYSTEM				
- • XIC #0: 210.20001220703125/	Manufacture				Alleview				
- • XIC #1: 2/1.23336//32306/3/	Manufacturer: SCIEX			Amilation:					
- • XIC #3: 635.4000244140625/2	Model Name:	API 3000		Role:					
- • TIC id=tic-es11	Serial No: 2449903			Location:					
 MRM (4 transitions) id=12 	Ermuter			Dhones					
 NIC #0: 210.20001220703125/ 	rannae.			PINALE.					
 	Software:			EMail:					
- • XIC #2: 609.3999633769062/1 - • XIC #3: 635.4000244140625/2	Manufacturer:	SCIEX		Type:	OHuma	in .			
- O TIC id=tic-es17	Name:				Softw	vare			
- MRM (4 transitions) id=18					O Devic	ie in the second se			
- • XIC #0: 210.20001220703125/	Version:				-				
S XIC #1: 271,29998779296875/ *									
								_	

Figure 4-49 Example TIC – Origin

6. Click **History** to view the date and time that the sample was acquired.

Figure 4-50 Example TIC – History



View Audit Trail Generated by the Keystone Converter Software

The time and date stamps are in the Audit Trail records in UTC format. When the files are opened, they are converted to the local time and shown in the right panel.

- 1. Open the Keystone Viewer Software.
- 2. Click **File > Open** and then browse to the file location.
- 3. Select the appropriate animl file.

Tip! Hold the Shift key to select multiple animl files.

- 4. In the left panel, click **Audit Trail**.
- 5. Scroll to the Audit Trail at the end of the file.

Renew the Keystone Viewer Software License

1. Obtain a new license file from SCIEX and then save it on the desktop.

- 2. Browse to C:\ProgramData\KeystoneViewer\license and then delete the **keystone_license.lic** file.
- 3. Click **Start > SCIEX Keystone > SCIEX Keystone Viewer** to open the Keystone Viewer Software.
- 4. Click **Select**.
- Browse to the desktop, select the keystone viewer license.lic file, and then click Open.
 The license selection dialog refreshes, showing the license file that was selected.
- 6. Click **Finish**.

The Keystone Viewer Software opens.

Contact Us

Customer Training

- In North America: NA.CustomerTraining@sciex.com
- In Europe: Europe.CustomerTraining@sciex.com
- Outside the EU and North America, visit sciex.com/education for contact information.

Online Learning Center

• SCIEX University[™]

SCIEX Support

SCIEX and its representatives maintain a staff of fully-trained service and technical specialists located throughout the world. They can answer questions about the system or any technical issues that might arise. For more information, visit the SCIEX website at sciex.com or contact us in one of the following ways:

- sciex.com/contact-us
- sciex.com/request-support

CyberSecurity

For the latest guidance on cybersecurity for SCIEX products, visit sciex.com/productsecurity.

Documentation

This version of the document supercedes all previous versions of this document.

To view this document electronically, Adobe Acrobat Reader is required. To download the latest version, go to https://get.adobe.com/reader.

The latest versions of the documentation are available on the SCIEX website, at sciex.com/customer-documents.

Note: To request a free, printed version of this document, contact sciex.com/contact-us.