Eksigent[®] Software Drivers

Analyst[®] Software 1.5.1, 1.5.2, 1.6, TF 1.5.1 HyStar[®] 3.2 Xcalibur[®] 1.3, 1.4, 2.0, 2.1, 2.2

Installation Guide



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Software Installation

This section describes the procedures required to install the Eksigent[®] control software on the host computer. The computer should already have the Analyst[®] software installed and configured for use.



Tip! If you intend to move an installed Eksigent LC device to a new computer, follow the steps in Appendix A to transfer the instrument configuration, calibration, and method settings to the new computer before installation.



Tip! If your operating system is Windows XP SP1 or SP2, refer to Appendix A before starting the Analyst software.

1. Insert the Eksigent software installation CD or download the software installation files from www.Eksigent.com/setup.



Tip! Any existing versions of the software do not need to be removed.

🕞 Setup - Eksigent	
	Welcome to the Eksigent Setup Wizard
	This will install Eksigent 3.11.0 on your computer.
	It is recommended that you close all other applications before continuing.
	Click Next to continue, or Cancel to exit Setup.
eksigent	
	Next > Cancel

Figure 1-1 Eksigent Setup dialog



Note: If the Setup Wizard dialog does not appear, run the file: **setup.exe** from the CD.

2. Click **Next** to continue through the installation process.



Tip! It is recommend to use the default directory and settings specified in the installation dialog when prompted.

Driver configuration

After the Eksigent software is configured for instrument type and proper operation is verified, configure the Analyst software drivers:

1. Select Start > Programs > Eksigent > Driver Configuration, see Figure 1-2).

The Driver configuration utility will automatically detect the version of the Analyst software installed on your computer.



Figure 1-2 Driver Configuration menu shortcut

- 2. Check **Driver** and the **AS1/AS2 Autosampler** options under the **Analyst** group, see Figure 1-3.
- 3. Click Apply.

If successful, the status next to the check box will change from **Not Registered** to **Registered**.

4. Click OK.



Tip! If necessary, you can later remove the driver from the Analyst software by using this utility, checking the relevant boxes, and clicking **Apply**.

Software Version: Location:	3.11.0, Build 120104 C:\Program Files\Eksigent NanoLC
Xcalibur: Not Registered	
Eksigent System Driver	Not Registered
AS1 / AS2 Autosampler Driver	Not Registered
Analyst: TF1.5	
Eksigent System Driver	Registered
AS1 Autosampler Driver	Not Registered
AS2 Autosampler Driver	Not Registered
Method Merger Tool	Registered
HyStar: Not Registered	
Eksigent System Driver	Not Registered

Figure 1-3 Eksigent Driver Configuration Utility

Configure the LC system

Refer to the *Eksigent Software User Guide* for setting up and calibrating your mass spectrometer. The mass spectrometer must be configured properly prior to attempting to establish control within the Analyst software.

Create hardware profiles using the Analyst Software

Caution: If you are using Windows XP, you must follow the directions in Appendix B prior to continuing. Failure to do so will prevent the software and hareware from functioning properly.

If the drivers were installed correctly, the Eksigent devices will be shown in the Companion Software area of the Analyst software Navigation Bar.





- 1. Start the Analyst software.
- 2. Double-click the Hardware Configuration icon in the Navigation Bar.

Hardware Configuration Editor	
Hardware Profiles:	
	New Profile
	<u>E</u> dit Profile
	Delete Profile
	Activate Profile
	Availa <u>b</u> le Devices
	Help
1	

Figure 1-5 The Analyst Software Hardware Configuration Editor

- 3. Choose the current hardware profile and either deactivate it or create a new one.
- 4. Click Edit Profile
- 5. Click Add Device
- 6. Select the device type **Software Application** and then click **OK**.

A	vailable Devices	×
	Variable Devices	
	OK Cancel Help	



- 7. The software device will now be listed as part of the profile. Select the device and then click **Setup Device**
- 8. Select the device type from the list.



Tip! Use **Eksigent Device CH1** for the LC system or **AS1 Autosampler** for the autosampler.

9. Give it a name and click **OK**.



Figure 1-7 The Analyst software devices list

10. Repeat step 7 to step 9 to add as many devices as required.



Tip! For NanoLC-2D systems, add both **Eksigent Device CH1** and **Eksigent Device CH 2**. For a NanoLC-1D, add **AS1 autosampler.** For QTRAP®, select all three devices in the hardware profile.

11. Click Activate Profile, see Figure 1-8.

Hardware Configuration Editor	
Hardware Profiles:	
MassSpecOnly	<u>N</u> ew Profile
Mass Spectrometer (0) on GPIB Board 1 Software Application Eksigent Device CH1 (0)	<u>E</u> dit Profile
🗄 🍝 Software Application Eksigent AS1 (1)	Delete Profile
	<u>A</u> ctivate Profile
	Availa <u>b</u> le Devices
	<u>C</u> lose
	<u>H</u> elp
1	

Figure 1-8 The Analyst software activated hardware profile

The Eksigent Control software will start and, if configured, a utility dialog for the AS1 autosampler opens. These dialogs will be visible during your experiments and will allow you to monitor the devices and edit methods.

12. Click Close.



Tip! Verify that the instruments are being controlled through the Analyst software by checking the hardware status, see View instrument status on page 12.

Note: For Eksigent Express-100 systems, you may also want to add a **PAL autosampler** or a **NI 6032E PCI A/D converter**. Refer to the *Analyst Software User Guide* for more information about these devices.

Available Devices	×
Device Type:	
Autosampler	•
De <u>v</u> ices:	
AutoSampler CTC PAL	
🐴 AutoSampler Gilson 215	
Autosampler Gilson 233	
AutoSampler Agilent 1100	
AutoSampler Famos	
AutoSampler PE200	
AutoSampler Endurance	

Figure 1-9 The Analyst Software Autosampler Devices

View instrument status

To verify the status of each instrument controlled by the Analyst software, click the window icon in the task bar at the lower right corner of the Analyst software dialog.



Figure 1-10 The Analyst software task bar

The **Software Application Status Dialog** indicates the current state of the installed instruments and additional instrument specific information, such as mobile phase flow rates, column pressures, and temperatures.

B Software Application Status		
		-
Brief Status:		
Name	Status	1
Eksigent Device CH2	Idle	
Eksigent Device CH1	Idle	
Eksigent AS1	Idle	
Detailed Status:		
Detailed Status.		
Eksigent Device CH2		
Actual Values		
Qa:: 0 nL/min		
Qb:: 1 nL/min		
Pc:: 0 psi		
wer2Nexel C.O. to 1, Mailine for Mathed For Time B	inin 00.00.00	
use.2 Nanolu Status: 1 - Waiting for Method Est. Time h	emaining: 00:00:00	
Eksigent Device CH1		
Actual Values		
Ua:: 220 nL/min		
Ub:: 4 nL/min		
Pc:: U psi		
use:1 NanoLC Status: 1 - Waiting for Method Est. Time R	emaining: 00:00:00	
Eksigent AS1		
AS1 Autosampler Status		
may remperature. 20 °C		
Autosampler: Idle		=1
		•

Figure 1-11 The Analyst Software Application Status Dialog

Build acquisition methods

An acquisition method in the Analyst software combines the methods of each individual device.

- 1. Open a new acquisition method by clicking the **Build Acquisition Method** icon on the Analyst Software Navigation Bar. All configured devices are present.
 - Acquire (1)
 King Acquire (1)
 King Acquisition Method
 Build Acquisition Method
 Build Acquisition Batch
 ZZZ Express View

Figure 1-12 The Analyst Software Navigation Bar

2. Select the Eksigent device to assign a method and then select an existing method on disk using the ... button.

Acquisition method	Software Applica	tion Properties
- M Acquisition Method - Ø. Mass Spec 0.000 min - B Period 0.000 min	Path: Filename:	C:\Projects\NanoLC_206_PreBeta\settings\method
Eksigent Device CH1		

Figure 1-13 The Analyst software: acquisition method editor

Eksigent device methods for LC systems can be created and edited using the **LC Method** button in the Eksigent software dialog. See the *Eksigent Software User Manual* for more information on creating methods.

Acquisition method	Software Applica	tion Properties
Acquisition Method Mass Spec 0.000 min Period 0.000 min Second 0.000 min Escigent Device CH1 Eksigent AS1	Path: Filename:	C:\Projects\NanoLC_206_PreBeta\settings\EKAS1

Figure 1-14 The Analyst software: acquisition method editor

Eksigent AS1 autosampler methods can be created and edited using the **Autosampler Method** button in the AS1 utility dialog. See the *Eksigent Software User Manual* for more information on creating methods.

Peak parking

Peak Parking is a method that extends the analysis time of MS/MS interrogation for peaks of interest eluting from the LC column. The LC column flow rate is immediately reduced to a predetermined rate when the initial portion of the peak (fraction) enters the MS.

The Analyst software can control the built-in peak parking feature of the Eksigent LC devices. This feature is controlled within the Analyst software MS method by the Information Dependent Acquisition (IDA) criteria.

1. Right Click the **Period** icon to add IDA criteria.



Figure 1-15 The Analyst Software: MS Acquisition Method Editor

2. Select the **Peak Parking** tab within the IDA criteria dialog and then select the **Enable** box. The LC flow rate and other parameters can be defined in this dialog.

Acquisition method	IDA - Second Level Criteria Peak Parking	
Acquisition Method	Enabled	
Errege Period 0.000 min	Percentage of total flow (%):	10.0
IDA Criteria	Minimum number of candidates to find:	1
Eksigent ASI	Ion source gas 1 (GS1):	0.0
Eksigent Device CH2	Ion spray voltage (IS):	700.0

Figure 1-16 The Analyst Software: MS Acquisition Method Editor

Note: If the Peak Parking criteria are set too low in the IDA method the analysis may never end and will require manual termination.

During the sample sequence, the **Analyst Software Application Status Dialog** indicates the current state of the LC device when peak-parking is in progress.

The Eksigent software acquisition dialog also shows all relevant device information when peak parking is in progress.

Software Installation

Tip!

This section describes the procedures required to install the Eksigent[®] control software on the host computer. The computer should already have HyStar 3.2 installed and configured for use.

Tip! If you intend to move an installed Eksigent LC device to a new computer, follow the steps in Appendix A to transfer the instrument configuration, calibration, and method settings to the new computer before installation.

1. Insert the Eksigent software installation CD or download the software installation files from www.Eksigent.com/setup.

Any existing versions of the software do not need to be removed.



Figure 2-1 Eksigent Setup dialog

Note: If the Setup Wizard dialog does not appear, run the file: **setup.exe** from the CD.

2. Click **Next** to continue through the installation process.



Tip! It is recommend to use the default directory specified in the installation dialog when prompted.

Driver configuration

After the Eksigent software is configured for the instrument type and proper operation is verified, configure the HyStar software drivers:



Figure 2-2 Eksigent programs menu

1. Select Start > Programs > Eksigent > Driver Configuration, see Figure 2-2).

The Driver configuration utility will automatically detect the version of the HyStar software installed on your computer.

- 2. Check Eksigent System driver option under the HyStar group, see Figure 2-3.
- 3. Click Apply.

If successful, the status next to the check box will change from **Not Registered** to **Registered**.

4. Click OK.



Tip! If necessary, you can later remove the driver from the Hystar software by using this utility, checking the relevant boxes, and clicking **Apply**.

🔂 Eksigent Driver Configuration Utility	
Software Version: 3.11.0, Build 12 Location: C:\Program Files\Eksigent Nam	
Xcalibur: Not Registered	
Eksigent System Driver	Not Registered
AS1 / AS2 Autosampler Driver	Not Registered
Analyst: Not Registered	
Eksigent System Driver	Not Registered
AS1 Autosampler Driver	Not Registered
AS2 Autosampler Driver	Not Registered
Method Merger Tool	Not Registered
HyStar: C:\Program Files\Bruker Dalto	nik\HyStar\
Eksigent System Driver	Not Registered

Figure 2-3 Eksigent Driver Configuration Utility

Configure the LC system

Refer to the *Eksigent Software User Guide* for setting up and calibrating your mass spectrometer. The mass spectrometer must be configured properly prior to attempting to establish control within the HyStar software.

Mass Spectrometer Configuration using the HyStar Software

1. Start HyStar.

HyStar - [Version 3.2]	
bodule took yww compass teep	
Hardware Setup Method Sample Table Acquisition Processing Exit	
For Help, press F1 Main Page	Sergel

Figure 2-4 Main dialog

2. Click **Hardware Setup** and select an existing configuration file or type in a name for a new configuration.



Figure 2-5 Open Harware Setup File Dialog

- 3. Scroll down to LC System and select the box next to it.
- 4. In the box in the lower part of the dialog select **Eksigent LC System.**
- 5. Click Settings from the LC System Setup group.
- 6. Configure Eksigent.



Tip! Depending on the selected configuration, several HyStar selections may become disabled (that is, if the Eksigent system is equipped with a column heater, the Oven item will become disabled and set to Controlled by System).

Hardware Setup - Express100.hss			X
General System System Times & V	olumes Accessory Settings		List of Hardware Setup files. Look in:
Hardware categories	Hardware	Port(Interface)	C:\Hystar\Configs
Solvent Delivery System	Eksigent LC System	System	a.hss
Sample Introduction	Demo ALS	WLAN	Diffs express100.hss autoes100.use has
			nanolc.hss
☑ √Q LC Detectors	Eksigent LC System / Eksigent LC System	System/System	
🖬 🚉 LC System	Eksigent LC System	COM1	
🗆 山崎 Interface			
NMR Spectrometer			
Mass Spectrometer			
Fraction Collector			
AUX Auxiliary devices			
Valve devices			
LC System Setup			
Choose the LC Sys	tem and define connecting port	Solvents	
Eksigent LC System	m Connected via RS-232 Set	tings	
		for LC Pump	
Additional Description			hystar 🕷
			· · · · · · · · · · · · · · · · · · ·
			Hardware Setup
Active Hardware Setup file C:\Hy	star\Configs\Express100.hss		Browse
Open Save As	Print		Close

Figure 2-6 Hardware Setup Dialog

7. Select **Solvent Delivery System**. In the lower part of the dialog select **LC Pump 2** and choose **Eksigent Pump 2** (The Eksigent LC System selected earlier will be the channel 1 in this configuration).

8. Select the device in the **Eksigent Device** drop-down list (i.e. NanoLC-2D Parallel, Express-100, etc.) from the **System Configuration** group.

Eksigent Nano LC		x
System Device I / O	Advanced	1
-System Configuration	·	
Eksigent Device	NanoLC-2D	
COM port		
System shut-o	slown if idle more than 120 min.	
Display Options		
Display flow p	profile setpoint values instead of measured flow values in the status area.	
	OK Cancel Help	

Figure 2-7 Eksigent Device Configuration

- 9. Set any other desired device configuration parameters.
- 10. Click **OK**.
- 11. After configuring the Eksigent devices, click **Close** from the **HyStar Hardware Setup** dialog to save the configured device values to a configuration file.

The HyStar software is now configured to control the installed devices.

Device status

The status of all installed devices can be viewed at any time in the top section of the **Acquisition** dialog in the HyStar software.



Figure 2-8 Eksigent Device Status dialog

The **Eksigent Device Status** dialog will indicate the current state of the installed instruments and additional instrument specific information, such as mobile phase flow rates, column pressures, and temperatures.

Note: For multi-channel devices the status information is specific to the selected channel and are displayed side by side.

Note: If there is a problem with the device an error condition will be indicated in the status window.

Device method editors

Methods for each device are created within the HyStar software method editor through the **Advanced Parameters** button.

LC Method Part Editor - test-3min.m	<u>×</u>
General LC Parameters LC Timetable Signals	8
start data acquisition runtime delay→ pump runtime (total run) →	LC Pump Autosampler UV/DAD Detector Advanced Parameters
Total Runtime 3.0 min	Co Solvents 7 = (1-64 valid Mix Templates defined in the Hardware Setup (Pump))
	Flow Rate [ml/min] 0.01 A 100.0 %
Data Acquisition	Min Max B 0.0 ≈ Pressure limits [bar] 0 9999
Runtime 3.0 min	
Open Save <u>A</u> s <u>P</u> rint	

Figure 2-9 Starting the Eksigent LC Device Method Editor



Tip! All LC method parameters must be set using the **Additional Parameters** field and not by using the **HyStar Method Editor** fields.

1. To create or access a set of device methods, select **Methods** from the main HyStar dialog or **Edit Method** from within the sample table or the **Acquisition** dialog.



Tip! Care must be taken to synchronize the runtime specified in the **Eksigent Method Editor** and the general **Total Runtime** and **Acquisition Runtime** on the main **Method Editor** dialog. The same applies to the **UV** wavelength and **PDA range**. See Figure 2-9.

2. Click **Advanced Parameters** button on the main **HyStar Method Editor** dialog. See the *Eksigent Software User Manual* for more information about editing method parameters for each Eksigent device.

		able Derector		
Method Identificatio	n			
Method ID	default			
-Column Information				
Manufacturer	Eksigent Technologies		particle size 3	Дл
Туре	ChromXP		diameter 150	ця
Serial Number			length 10	сп
Sample Injection	1	- Flow Profile	5 1 10	
1	Vone/Manual	Duration	n: 3 min.	
Detection				
Data will be acqu	ired at 5.7 Hz. This acquisition ra	ate results from averaging 22 C0	CD exposures of 7 ms	
each. The acquis	ition will continue for 3 minutes,	collecting 1047 spectra. The cu	irrent spectrum is	
754 kb.	200 nm and 380 nm at 1 nm incr	ements. The estimated full-spec	trum data file size is	

Figure 2-10 Eksigent LC Device Method Editor

Note: For multi-channel instruments, each channel is considered an independent device.

Additional instrument dialogs

Access to some of the primary Eksigent instrument control software functionality is provided through the drop-down list located in the status box from the main **Acquisition** dialog in the HyStar software. **Diagnostics** and **Direct Control** are also provided on this main dialog.



Figure 2-11 Eksigent LC Device Control Dialogs

Data acquisition

No special steps are needed to configure Eksigent data acquisition in the HyStar software. Every time the driver runs, all available data is sent to the HyStar software for real-time display and storage. Stored data files can be further processed in the **Post Processing** area of the HyStar software.



Figure 2-12 Eksigent data displayed on HyStar real-time page and being stored in HyStar data file.

All Eksigent systems provide four auxiliary data channels to the HyStar software. Flow A (Qa), flow B (Qb), the raw A/D signal, and Pressure at column (Pc). Flow units are nl/min. Pressure is in psi, and the A/D signal is volts.

Eksigent systems equipped with UV and PDA detectors will provide both the chromatogram and the spectral data to HyStar. The units are AU (Absorbance units).

Software Installation

This section describes the procedures required to install the Eksigent[®] control software on the host computer. The computer should already have the Xcalibur software installed and configured for use.



Tip! If you intend to move an installed Eksigent LC device to a new computer, follow the steps outlined in Appendix A to transfer the instrument configuration, calibration, and method settings to the new computer before installation.

1. Insert the eksigent software installation CD or download the software installation files from www.eksigent.com/setup.



Tip! Any existing versions of the software do not need to be removed.



Figure 3-1 Installation screen

Note: If the Setup Wizard dialog does not appear, run the file: **setup.exe** from the CD.

2. Click **Next** to continue through the installation process.



Tip! It is recommend to use the default directory specified in the installation dialog when prompted.

Driver configuration

After the Eksigent software is configured for the instrument type and proper operation is verified, configure the Xcalibur software drivers:

1. Select Start > Programs > Eksigent > Driver Configuration, see Figure 3-2).

The Driver configuration utility will automatically detect the version of Xcalibur software is installed on your computer.



Figure 3-2 Eksigent programs menu

- 2. Check **Eksigent System driver** and the **AS1 Autosampler** options under the **Xcalibur** group, see Figure 3-3.
- 3. Click Apply.

If successful, the status next to the check box will change from **Not Registered** to **Registered**.



Figure 3-3 Eksigent driver configuration utility

4. Click OK.

(-)	
	Y.	ſ		
	-	2		

Tip! If necessary, you can later remove the driver from the Xcalibur software by using this utility, checking the relevant boxes, and clicking **Apply**.

Configure the LC system

See the *Eksigent Software User Guide* for setting up and calibrating your mass spectrometer. The mass spectrometer must be configured properly prior to attempting to establish control within the Xcalibur software.

Mass Spectrometer configuration using the Xcalibur software



1. Start the Xcalibur software Instrument Configuration.

Figure 3-4 Instrument configuration shortcut

2. From the **Available Devices** group, click the **Eksigent LC Channel 1** and then click **Add>>** to add it to the **Configured Devices** group list.

🖏 Thermo Foundatio	n Instrument Configuration		×
Device <u>T</u> ypes :			
All			
Available Devices:		Configured Devices:	
eksigent			
Eksigent LC 1	Eksigent NanoLC-AS1/A		
			-
	Add>>	Configure	
	Done	Help	

Figure 3-5 Instrument Configuration

- If you are configuring a NanoLC-1D+ or NanoLC-2D system, from the Available Devices group, click the Eksigent LC Channel 2 device and select Add>> to add it to the Configured Devices group list.
- 4. If you are using the Eksigent AS1 autosampler, from the **Available Devices** group, click on the **Eksigent AS1 Autosampler** and select **Add>>** to add it to the **Configured Devices** group list.
- 5. Click the Eksigent LC Channel 1 configured device to select it.
- 6. Click the **Configure** button.

The **Device Configuration** dialog appears.

7. Select the correct device from the drop-down list from the **Device Configuration** dialog.

8. Set other desired **Device Configuration** parameters.

Eksigent Na	ino LC		×
System	Device 1/0	Advanced	_
Syst	em Configuration	,]	
	Eksigent Device	NanoLC-2D	
	COM port	СОМ1	
	Injection Valve	None	
г	System shut-o	lown if idle more than 120 min.	
Disp	lay Options		
Г	Display flow p	rofile setpoint values instead of measured flow values in the status area.	
		OK Cancel Help	

Figure 3-6 Eksigent Device Configuration

- 9. Click OK.
- 10. If it is configured, click Eksigent AS1 Autosampler.
- 11. Click Configure to open the Eksigent AS1 Autosampler Configuration dialog.

SparkUe Config Dialog	
Autosampler COM Port (1-16):	2
Autosampler ID (21 only):	21
<u> </u>	Uancel

Figure 3-7 Eksigent NanoLC-AS1 Autosampler Configuration

- 12. Set the COM port and then click **OK** to save the settings.
- 13. After configuring the Eksigent devices, click **Done** in the **Xcalibur Instrument Configuration** dialog to save the configured device values.

Device Types :			
All	~		
wailable Devices:		Configured Devices:	
eksigent		eksigent	
Eksigent LC 1	Eksigent NanoLC-AS1/A	Eksigent LC 1 Eksigent NanoLC-AS1/A	
	Add >>	<pre> Configure</pre>	

Figure 3-8 Instrument Configuration

The Xcalibur software is now configured to control the installed devices.

Device status

The status of all installed devices can be viewed at any time by selecting the device from the **Status** tab in the **Main Xcalibur Roadmap** dialog.



Figure 3-9 Channel 1 status

The **Device Status Window** will indicate the current state of the installed instruments and additional instrument specific information, such as mobile phase flow rates, column pressures, and temperatures.



Figure 3-10 NanoLC-AS1 Autosampler status



Note: For multi-channel devices, the status information is specific to the selected channel.



Note: If there is a problem with the device, an error condition will be indicated in the status window.

Device method editors

Methods for each device created within the Xcalibur software is similar to other instruments controlled by the Xcalibur software.



Figure 3-11 Starting the Eksigent LC Device Method Editor

To create or access a set of device methods, select **Instrument Setup** in the **Main Xcalibur Roadmap** dialog.

🗰 Untitled - Thermo Xcalibur Instrument Setup	
Eile Eksigent LC 1 Help	
Eksigent Eksigent LC 1 Method Identification Method ID Gefault Column Information Manufacturer Eksigent Type ChromXP Serial Number Sample Injection External Detector Auxiliary A/D channel available	ation: 60 min.
Ready	

Figure 3-12 Eksigent LC Device Method Editor

Select the device icon in the left side pane to edit the method for each device. Refer to the *Eksigent Software User Guide* for more information about editing method parameters for each device.

🗰 Untitled - Thermo Xcalibur Instrument Setup			×
Ele Eksigent NanoLC-AS1/AS2 Autosampler Help			
eksigent Eksigent AS1/AS2 Method Editor		1060608	^
Eksigent LC 1			
Eksigent NanoLC-AS1/AS			
[Import Autosampler Method] Export Autosampler Method Test on B1	Stop		>
Ready			1

Figure 3-13 Autosampler Method Editor



Note: For multi-channel instruments, each channel is considered an independent device.

Additional instrument dialogs

Access to the primary Eksigent Control software is provided through the drop-down menu within the **Instrument Setup** dialog.

The main LC acquisition window as well as individual toolboxes, diagnostics, and control dialogs can be viewed here.

🗑 Untitled - Therm	mo Xcalibur Instrument Setup			
Eksigent LC1 Hel Diagnostics Peak Parking Mobile Phase Direct Control Main Window Data Collection. Eksigent LC1 Eksigent Eksigent LC1	mary Run Conditions Gradient Profile Gradient Table thod Identification Column Information Method ID default Column Information Manufacturer Eksigent Type ChromXP Gradient Profile Flow Profile Deration: 60 min	3 150 10	µт µт µт ст	
Diamostics	Detection External Detector . Auxiliary A/D channel available .			

Figure 3-14 Eksigent LC Device Control Dialogs

Peak parking

Peak Parking is a method that extends the analysis time of MS/MS interrogation for peaks of interest eluting from the LC column. The LC column flow rate is immediately reduced to a predetermined rate when the initial portion of the peak (fraction) enters the MS.

The Xcalibur software can control the built-in peak parking feature of Eksigent LC devices. This feature is controlled within the Xcalibur software MS method by custom Data Dependence criteria. See the *The Xcalibur Software Reference Guide* for more information about these parameters and their meanings.

Custom Data Dependence							
I Enabled							
Actions	Activation threshold: 100000	_					
Divert valve	Deactivation hysteresis: 0						
High voltage Spare trigger	Source high voltage delta: 0	_					
Contact closure	Stabilization time (sec):						
Dependence mode							
© Base peak							
• <u>m</u> ass list Mass [is	st:	-					
Positive polarity adducts:							
Negative polarity adducts:							
OK Cancel <u>H</u> elp							

Figure 3-15 MS acquisition data dependence settings

During sample acquisition, the **Eksigent Device Status** window will indicate the current state of the LC device when peak-parking is in progress.

The **Eksigent Software Acquisition** window will also display all relevant device information when peak parking is in progress.



Note: Peak parking is controlled via external trigger. The instruments must be connected together correctly for the mass spectrometer to trigger the LC device peak-parking mode.

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Note: If Peak Parking criteria are set too low in the MS method the analysis may never end and will require manual termination.

The Eksigent LC peak-park parameters are configured within the **Peak-Park Toolbox**. These options determine what action the Eksigent device performs when activated by external trigger. See the *Eksigent Software User Guide* for more information on these settings.



Figure 3-16 Eksigent Peak-park Toolbox

Data acquisition

Eksigent device data can be passed to the Xcalibur software for real-time display and storage in .raw data files for further processing in Quan and Qual Browsers.



Figure 3-17 Eksigent data displayed on Xcalibur real-time page and being stored in Xcalibur Raw data file.

All Eksigent systems provide four auxiliary data channels to the Xcalibur software. Flow A (Qa), flow B (Qb), the raw A/D signal and Pressure at column (Pc). Flow units are nl/min. Pressure is in psi, and the A/D signal is volts. These signals are labeled by the Xcalibur software A/D card 1, ch. 1, A/D card 2, ch. 1, A/D card 3, ch. 1, A/D card 4, ch. 1 respectively.

Eksigent systems equipped with UV and PDA detectors can provide both the chromatogram and the spectral data to the Xcalibur software. The units are Absorbance Units (AU).

The data passed to the Xcalibur software can be optionally enabled/disabled (to save both display and storage space) by selecting **Instrument Setup > Eksigent LC Channel 1 (or 2) Menu > Data Collection**. This affects both real-time display and storage in a .raw file. A restart of the Xcalibur software is required. These settings are per channel (for 2-D systems) and are stored as a user preference.



Figure 3-18 Configure desired amount of data collection.



Configuration files

After moving an installed Eksigent LC device to a new computer, to transfer the configuration, calibration, and method information to the new computer before attempting to use the device in its new location follow these steps:

- 1. On your old computer, run the Eksigent[®] software, access the Service Configuration dialog, double-click the status bar graphic and enter password: **techno**.
- 2. Click Export Settings.
- 3. Close the software.
- 4. Copy the entire C:\Program Files\EksigentNanoLC\Settings directory to a transfer disk.
- 5. Copy the entire directory contents into the same folder location on the new computer (create the C:\Program Files\EksigentNanoLC\settings directory).
- Open the file: C:\Program Files\EksigentNanoLC\settings\EKsettings.reg.
 You will be prompted to copy the settings into the Windows registry.
- 7. Click OK.
- 8. Install the Eksigent software on the new computer.



The Analyst[®] Software

A significant issue has been identified for users using the Analyst[®] software on Windows XP. This issue prevents external device control on SP1 and causes the system to stop responding on SP2. Below are steps required to correct the issues using Analyst software and software drivers on systems running Windows XP. An Analyst software hot fix is forthcoming – please contact your AB SCIEX representative if you have further questions concerning this issue.

Users with Windows 2000 or NT do not need this fix.

Systems with Windows XP SP1

Users with Windows XP SP1 must not run in Integrated Security Mode. It can be changed by:

- 1. Start the Analyst software.
- 2. Open the Security Configuration tab.
- 3. Select More.
- 4. Click the **Security** tab.
- 5. Click **Single user**.
- 6. Click Apply.
- 7. Click OK.
- 8. Restart Analyst software.

After configuring the hardware profile, if the instrument control is still not functioning, or if you require the use of other security modes, upgrade to Windows XP SP2 and follow the directions for SP2. The upgrade is free and available at: http://windowsupdate.microsoft.com.

Systems with Windows XP SP2

- 1. Click Start > Control Panel > Administrative Tools > Services.
- 2. In the **Services** dialog, locate AnalystService and then click **Stop**.



Tip! Do not close the Services dialog.

- Click Start > All Programs > Accessories > Windows Explorer to browse to the Analyst software bin directory. This is most likely installed on C:\Program Files\Analyst\bin. Locate and delete msvcrt.dll.
- 4. Return to Services, select AnalystService and then click Play.

Return to install the Eksigent software drivers.

The HyStar Software

There is a known issue in the HyStar software that occurs when the CTC PAL autosampler encounters a hardware error such as a missing sample vial or misalignment. There are two paths for recovery depending on whether data acquisition has begun.

1. Before data acquisition begins.

The HyStar software will not allow data acquisition to be terminated because the system is not yet in a run state. The **HyStar** button remains blue.

- Right-click the red autosampler button located in the **HyStar Acquisition** dialog.
- Select Abort Injection and confirm the selection.
- The **HyStar** button will change from blue to yellow or green.
- Right-click the red autosampler button again.
- Select **Reset Communication** and confirm selection.
- The autosampler communication will reset and the autosampler button will turn yellow and then green.
- Once the hardware error condition is corrected, the sample table can be reloaded and the analysis restarted.
- 2. After data acquisition begins

The HyStar software will not hang-up however, the autosampler communication will need to be reset by doing the following:

- Right-click the red autosampler button in the HyStar
- In the Acquisition dialog, select Reset Communication and Confirm Selection.
- The autosampler communication will reset and the autosampler button will turn yellow and then green.
- Once the hardware error condition is corrected, the sample table can be reloaded and the analysis restarted.