

# **USB pH MONITOR**

# DataApex Clarity Control

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#### SISW PH MONITOR CONTROL MODULE

This manual describes the setting of Science Instruments and Software **USB pH Monitor**. The control module enables direct control and continuous monitoring of pH measured by device. The pH measuring device is powered and communicates via computer USB interface.



Direct control means that the pH measuring activity is fully controlled from Clarity environment. Measured pH data may be permanently stored in the measured chromatograms.

The control is performed via the UNI Ruby control module and SISW USB pH Monitor profile.

## REQUIREMENTS

- Clarity installation package with appropriate control license (P/N A24 LC Control)
- Free USB port in the PC
- USB pH Monitor Installation CD with USB drivers and pH Monitor Utilities

#### INSTALLATION PROCEDURE

Following chapter describes installation of pH Monitor USB drivers and utilities followed by Clarity system configuration.

#### INSTALLING USB PH MONITOR

Installation of software package of pH Monitor should be performed prior to connection of device to the computer. To install the software and drivers, insert the software CD into drive on your computer. The installation process will normally start automatically. If the auto play function is disabled, run setup.exe from the root folder of CD. Then follow the instruction of the software installer.

Now connect the pH Monitor to a spare USB port on computer. The installation of USB drivers will be finalized within a minute.

Verify the correct installation of drivers using USB pH Monitor software utilities. Start the application from Windows **Start|All programs|SISW|USB pH Meter**. The application window as on the picture below should appear. USB pH Monitor should be automatically found and connected. Quit the application.



#### CLARITY CONFIGURATION

- Start the Clarity by clicking on its icon on the desktop.
- Invoke the System Configuration dialog from Clarity window using System | Configuration command.
- Click the *Add...* button (1) on System Configuration window to invoke the *Available Control Modules dialog.*





• Specify the search filter "RUBY" (2)..

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• Select the correct item (3) and click the Add button (4).

• The DataApex UNI Setup dialog will appear.

Da	taApex UNI Setup	-	×	
Ruby Script:			Autodetect	
		Property	Value	
			OK Cancel Help	

- Set desired Ruby Script for USB pH Monitor. The correct SISW-USB-PH-METER.RB script for SISW USB pH Monitor can be found in the *Utils\Uni\_Drivers\SISW\* folder (accessible through the \_\_\_\_\_\_ button) of the Clarity root directory.
- Select the correct USB pH Monitor from *Port* drop down box.
- You might want to change *Device Name* for the pH Monitor device.
- The USB pH Monitor item (5) will appear in the Auxiliary section of Setup Control Modules list.
- Select desired instrument tab (6).
- Drag the USB pH Monitor item from the Setup Control Modules list on the left side to the list of desired modules on the right side (7). You can use the ---> button (8) alternatively.

#### USING THE CONTROL MODULE

No additional tab is created in the *Method Setup* dialog when USB pH Monitor is installed. New item is available in the *Auxiliary Signal* list on the *Advanced* tab of Method setup dialog. The pH Monitor section is created in the *Device Monitor* window.

#### METHOD SETUP – ADVANCED

New auxiliary signal (pH measured by pH Monitor) is now available on the *Advanced* tab of *Method Setup* dialog. Checking the *Store* checkbox enables displaying pH auxiliary signal in the *Data Acquisition* window. pH data will be stored in the measured chromatograms.

Subtraction	2				
Chromatogram	[None]				
Matching	No Change		•		
	Set		None		
Column Calculations					
Unreta	ined Time	0	[min.]		
Column	Length	50	[mm]		
	Statistica	Moments			
	From Wid	dth at 50%			
	Auviliary Signa	.I	Store	_	
1 pH pH Monitor					

#### DEVICE MONITOR

**Monitor | Device Monitor** command from the Instruments window invokes the *Device Monitor* window with actual USB pH Monitor status. The *Current pH* value is continuously the updated.

3 Instrument 1 - Device Monitor		x
Eile Co <u>n</u> trol <u>V</u> iew <u>W</u> indow <u>H</u> elp	1 1 4 5 5 6 8 6 7 7 8 0	
Net-PAD SN 19	Ready	0
USB pH MONITOR	Ready	0
Property	Value	
1 Current pH	4,94	
For Help, press F1		

#### DATA ACQUSITION WINDOW

When enabled in the *Method Setup* dialog – *Advanced* tab, auxiliary signal pH is displayed in the *Data Acquisition* window. Axis range for pH signal can be set in the Axes Range dialog. Axes Range dialog will be invoked by View|Set Axes Ranges... in the Data Acquisition window. When *Auto* checkbox is checked, the pH signal axis range starts at a minimal value and enlarges according to the signal change. When unchecked, the axis range is fixed to the entered values.

		Fixed	Floating	
	From	To	Range	
Time Axis	0 min.	60 min.	5 min.	-
Signal Axis	-10 mV	1050 mV	5 mV	=
ndividual Settings				
-				_
		Fixed	Floating	
	From	Fixed To	Range	-^
Net-PAD - 1	From -10 mV	Fixed To 1000 mV	Range 10 mV	
Net-PAD - 1	From -10 mV	Fixed To 1000 mV	Ioating Range 10 mV	
Net-PAD - 1 Auxiliary Signals	From -10 mV	Fixed To 1000 mV	Hoating Range 10 mV	
Net-PAD - 1 Auxiliary Signals pH pH Monitor	From -10 mV From 0	Fixed To 1000 mV To 14	Auto	

pH signal provided by USB pH Monitor is then displayed in the *Data Acquisition* window of the appropriate instrument.



#### DATAAPEX UNI SETUP AND PH CALIBRATION

DataApex UNI Setup dialog contains several items which can be modified. It also allows to calibrate the USB pH Monitor at two calibration points.

Da	ataA	pex UNI Setup	×
	Ruby Port	y Script: TTLS\Uni_D : SISW USB p	rivers\SISW\SISW-JSB-PH-METER - kopie.rb H Meter - 40153
	Г	Property	Value
	1	pH Monitor Name	pH Monitor
	2	Calibrate at pH1	Calibrate @ point 1
	3	Calibration point 1 (pH)	4,07
	4	Calibrate at pH2	Calibrate @ point 2
	5	Calibration point 2 (pH)	7,00
			OK Cancel Help

#### **RUBY SCRIPT**

Ruby Scrip shows actually selected UNI Ruby script for the pH Monitor device.

#### PORT

Port serves for selecting the USB pH Monitor.

#### **INSTRUMENT NAME (PH MONITOR NAME)**

*pH Monitor Name* allows customize the name of the instrument. This name (in the *Value* column) will be used throughout the Clarity station.

#### CALIBRATION POINT 1 AND 2

Enter pH values of two buffers used for the calibration into *Value* column at row *Calibration Point 1 (pH)* and *Calibration point 2 (pH)*.

#### CALIBRATE AT PH1 AND PH2

Press the *Calibrate @ point 1* button when pH electrode is stabilized at pH 1 buffer. Measured value will be assigned and stored in the nonvolatile memory of USB pH Monitor. Repeat the procedure with another buffer at pH 2 using *Calibrate @ point 2* button.

#### **REPORT SETUP**

The reporting of the USB pH Monitor in the Method section of report can be enabled by checking the *Instrument Control* checkbox on the *Method* tab of the *Report Setup* dialog.

Report Setup Instrument			
Page Setup ✓ Lab. Header ✓ Repot Header × Calibration ✓ Chromatogram ✓ Results × Sequence × Audit & Signatures	Print On New Page Signals Al Only Active Signal Only Active Signal	<ul> <li>Info Header</li> <li>Instrument Parameters</li> <li>Acquisition Parameters</li> <li>GLP Info</li> <li>Event Table</li> <li>Instrument Control</li> <li>Instrument Control</li> <li>Instrument Control</li> <li>Instrument Control</li> <li>PDA Method</li> </ul>	OK Cancel Help New Open Save As Printer Printer Print Print To PDF Send PDF

USB pH Monitor settings are then reported.

