



Spectrophotometers and accessories

SCHOTT® INSTRUMENTS UVILINE 9100 | 9400

SI Analytics
a xylem brand

UviLine 9100 | 9400 - "H

SCHOTT® Instruments UviLine 9100/9400:

The new series of spectrophotometers from SI Analytics

The SCHOTT® Instruments UviLine range from SI Analytics comprises two completely new high-performance single beam photometers:

- UviLine 9100 for measurements in the VIS range from 320 to 1100 nm
- UviLine 9400 for measurements in the UV-VIS-range from 190 to 1100 nm

The new spectrophotometer's superior performance and exceptional performance range:

- Measurement of absorbance and transmission
- Concentration measurements up to 8 standards
- Multi-wavelength
- Spectra scan with online graphic
- Kinetics

▲ Powerful optics

The UviLine is characterized by an superior optical design in its class:

- 1200 lines/mm holographic, concave grating for minimal stray light
- Wide wavelength range from 190 – 1100 nm
- High optical resolution of 4 nm
- Automatic compensation of ambient light
- Automatic wavelength calibration



Hard facts“



▲ Wide measurement range and extensive accessories

The wide cell chamber allows the usage of cell holders with a length of max. 100 mm thereby enabling measurements of very low concentrations. Five different cell holders/sample changers are available, which can be exchanged easily:

- Single cell holder 10 mm (included)
- Single cell holder 10–100 mm
- Single cell holder 10 mm, water thermostated
- Single cell holder 10 mm, Peltier thermostated
- Automatic 5 + 1 cell changer

▲ Extensive evaluation functions

Store more than 100 user-defined methods and up to 1000 measurement values, approx. 30 spectra (expandable via USB device).

▲ Large backlit graphic display

The large display allows a clearly structured navigation and enhances the graphic evaluation using arrow keys and zoom function.

▲ Interface capability

The USB-B (slave) interface will connect to a PC. Both Uvi-Lines also have a USB-A (master) interface for connection to various instruments:”

- USB memory sticks and USB hard disks. This enables an easy expansion of the internal memory volume and also facilitates the data exchange (facilitates bi-directional data exchange).
- Standard printers with USB interface
- External PC keyboard
- A RS232 interface is also included

▲ Clear and well-arranged keyboard

With four function keys F1–F4 for fast and direct triggering of functions, such as settings, tools, zoom etc.

- Alphanumeric keys for entering the wavelengths, sample ID's and other parameters.
- Specially separated cursor section with ESC (escape) and START/ENTER keys for fast navigation.
- Also 5 additional keys with direct functions such as print, zero (reference), store etc.

UviLine 9100 | 9400 - "

SCHOTT® Instruments UviLine 9100/9400:

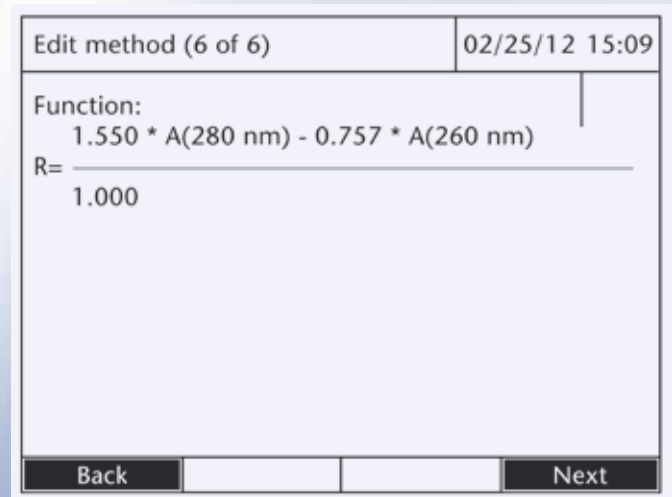
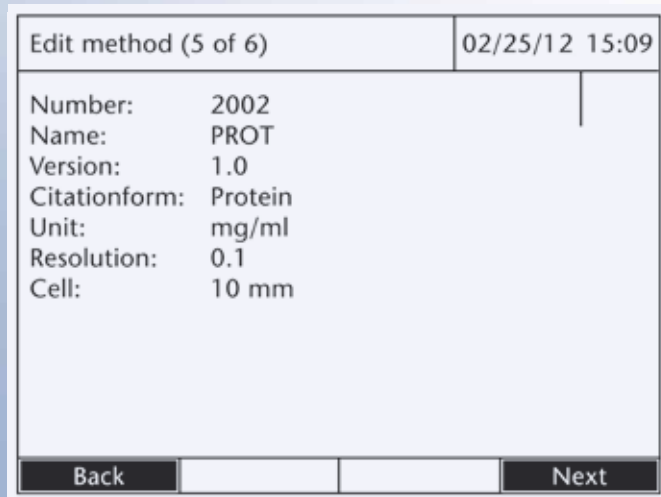
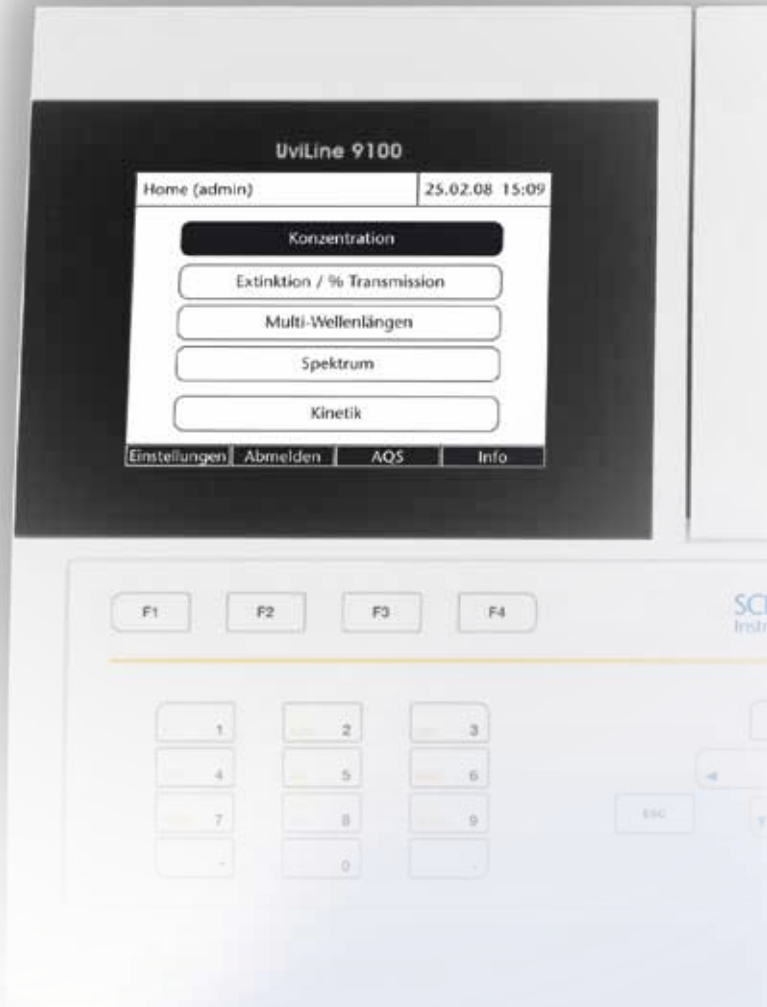
Software for spectra, kinetics and multi-wavelength analytics

Besides the standard applications such as absorption, transmission and concentration measurement, both UviLine models comprise the complete functionality for the spectra, kinetics and multi wavelength analysis.

Multi-wavelength analysis

With the multi-wavelength analysis, up to 4 absorption values with different wavelengths can be measured and saved.

- Multi-wavelength measurements are used e.g. for DNA and RNA determinations and protein determinations according to Warburg-Christian.
- For each application you have the possibility to program a user-specific method. By using programmed methods, the evaluation of the measuring results becomes easier.

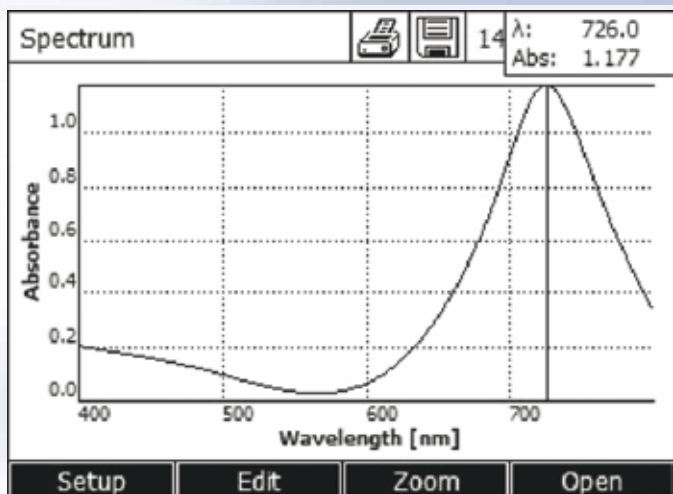


'Soft facts''

▲ Spectra

Whenever the optimal wavelength for the determination of the concentration is unknown or the purity of a solution is to be determined, the scanning of a spectrum becomes necessary.

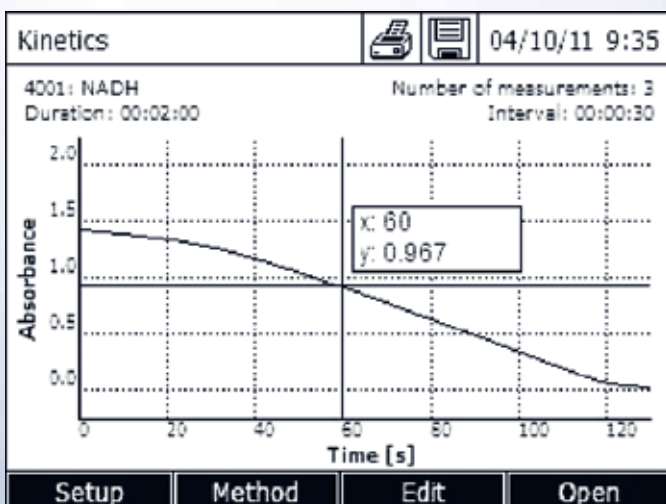
- By using the zoom function and the cursor the spectra can easily be edited.



▲ Kinetics

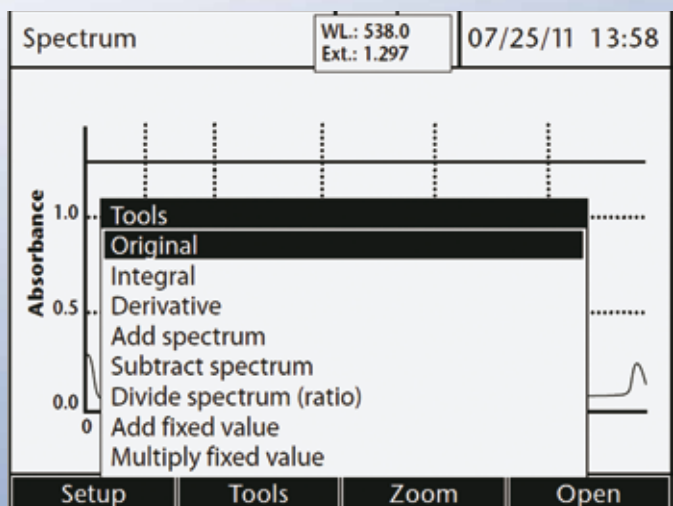
The kinetics program section allows the determination of the reaction rate constant.

- The kinetics measurement can be stored and subsequently evaluated using the cursor.



▲ Other functions

Additionally, there is a whole range of additional evaluation functions such as min/max recognition, spectrum addition and subtraction, derivative calculation (1st–3rd derivative), peak area calculation (integral) and fixed value multiplication.



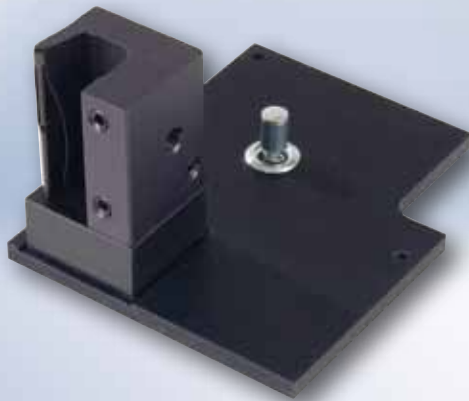
SCHOTT® Instruments UviLine 9100/9400: Accessories for special applications

The UviLine's readily accessible cell compartment allows the use of a large range of accessories to extend these spectrophotometers' applications and to automate the workflow.

▶ Easy exchange of accessories via QuickLock system

All accessories can be easily exchanged via a "QuickLock" system by a press of the finger. The massive metal baseplate of the accessories guarantees an optimal positioning of cells.

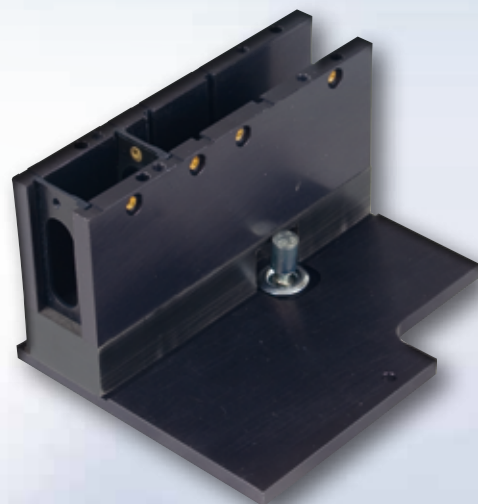
- All automatic accessories such as automatic cell changer, sipper or Peltier thermostated cell holder are fully software driven.



▶ Single cell holder, up to 10 mm optical path length

The 10 mm cell holder is included in the standard delivery of the UviLine. It guarantees a perfect positioning for all types of cells.

- It can be used with micro cells up to 50 μ l.
- An optional water thermostatable version is also available.



▶ Single cell holder, up to 100 mm optical path length

This cell holder allows the use of long path length cells up to 100 mm.

Accessories



Automatic cell changer 5+1

Designed to analyze 5 samples and 1 blank. It guarantees automatic applications with stable measurements and unique advantages.

- Removable and easy to reinsert turret for convenient cells setup
- Accurate positioning of low volume cells
- The blank value is always read *before* the sample measurement – a clear advantage for kinetics measurements.



Sipper

The sipper makes operation simpler and increases productivity.

It comes with a peristaltic pump integrated in the cell holder which is water thermostated and allows:

- Programmable suction from 500 μ l to 3000 μ l and
- Use of flow-through cells from 30 μ l to 450 μ l.



Peltier thermostatable cell holder

The thermoelectric Peltier element either heats or cools the sample in the cell to the required temperature. It is ideal for kinetic measurements:

- Temperature setup between 10°C and 60°C
- Accuracy: $\pm 0.5^\circ\text{C}$
- No external thermostat needed
- Sipper option
- Fast, ultra compact and fully instrument driven.

Technical Specifications - Software

Concentration	From 0 to 10 standards with interpolation. Graphic calibration curve management.
Kinetics	Dynamic graphic curve display, graphic management: zoom, slope calculation, current Abs
Spectrum scanning	Dynamic graphic curve display, graphic management: zoom, derivative, current Abs, maximum and minimum values
Multi Wavelength	Up to 10 wavelengths – flexible calculation of results
GLP compliant	User login with 3 levels
Storage capacity	Internal: 100 methods/30 graphics/1000 data sets - External: only limited by the size of the used USB device
Methods	> 100 methods

Technical Specifications - Spectrophotometer

Technical Specifications	UviLine 9100	UviLine 9400
Wavelength range	320 – 1100 nm	190 – 1100 nm
Light source	Halogen	Xenon
Technique	Single beam	
Optical resolution	4 nm	
Wavelength accuracy	± 1 nm	
Wavelength repeatability	< ± 0,2 nm	
Photometric range	–3.3 to 3.3 A	
Photometric accuracy	0.3 % or ± 0.003 A (from 0 – 0,6 A)	
Photometric linearity	< 1% at 2 Abs between 340 – 900 nm	
Stray light	< 0.1 % at 340 and 400 nm	
Display	Backlit graphic display, 320x240 pixel	
Update	Via internet and USB device	
Interfaces	1 x USB-A, 1 x USB-B, 1 x RS232C	
Power supply	110–220 V, 50/60 Hz	
Temperature range	Use: 10 °C to 35 °C/Storage –25 °C to 65 °C	
Dimensions	404 x 197 x 314 mm (W x H x D)	
Weight	4 kg	
Accessories	Sipper, 5+1 cell changer, water and Peltier thermostated cell holder, 10–100 mm cell holder	

Ordering Information

Type No.	Order No.	Product	Description
UviLine 9100	285700100	Spectrophotometer	UviLine 9100, single beam spectrophotometer, 4 nm with a measuring range from 320 to 1100 nm
UviLine 9400	285700120	Spectrophotometer	UviLine 9400, single beam spectrophotometer, 4 nm with a measuring range from 190 to 1100 nm
SZ 2100	285700200	Automatic cell changer	5+1 cell changer, controlled from UviLine
SZ 2110	285700210	Cell holder	Single, 10 – 100 mm
SZ 2130	285700230	Cell holder	Single, 10 mm, (included in delivery of all UviLines)
SZ 2140	285700240	Cell holder	Single 10 mm, water thermostated
SZ 2150	285700250	Sipper	controlled from UviLine
SZ 2160	285700260	Cell holder	Single 10 mm, Peltier thermostated

SI Analytics
a xylem brand

SI Analytics GmbH
Hattenbergstraße 10
55122 Mainz
Germany
Phone +49.(0)6131.66.5111
Fax +49.(0)6131.66.5001
si-analytics@xylem.com
www.si-analytics.com

SI Analytics is a trademark of Xylem Inc. or one of its subsidiaries.
© 2012 Xylem, Inc. 980 062US Version 08/2012