

# UviLine 9100/9400:

## The new series of Spectrophotometers from SCHOTT Instruments

### Two complete new high-performance single beam photometer:

#### UviLine 9100

for measurements at VIS range from 320 – 1100 nm

#### UviLine 9400

for measurements at UV-VIS-range from 190 – 1100 nm

The new spectrophotometers from SCHOTT Instruments convince with an exceptional wide performance range.

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

And additionally:

#### Extensive evaluation functions

The option of storing more than 100 own methods and up to 1000 measuring values/saving approx. 30 spectra (extendable via USB!)



# UviLine



# “Hard” facts:

## Large backlit graphic display

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

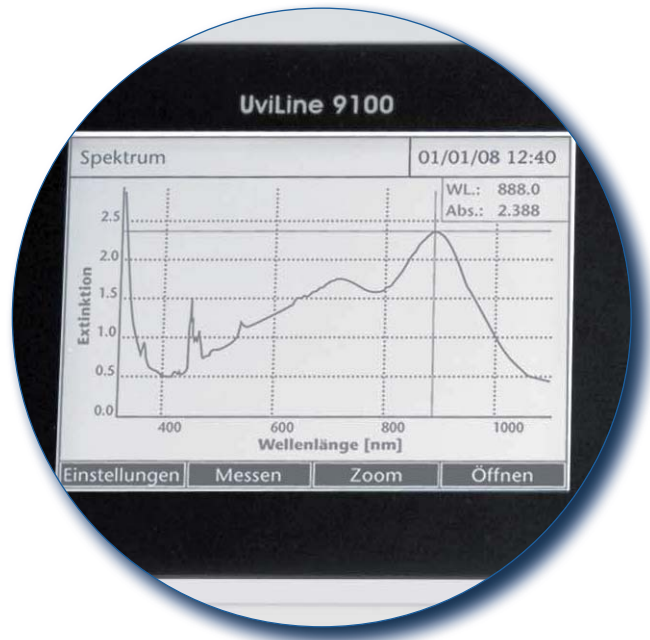
## Clear and well-arranged keyboard

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

Alphanumeric keys for entering the wavelengths, sample ID's and other parameters.

Specially separated cursor section with ESC and START/ENTER keys for fast navigation.

Also 5 additional keys with direct functions such as i.e. print, zero (reference), save etc.



### Modern interfaces

Besides the USB slave interface (USB-B) for connecting a PC, both UviLines also feature a USB master interface (USB-A). This USB master interface enables the connection of various instruments via USB:

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

### Powerful optics

The UviLine comprises an excellent optical design in this range:

- 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 wave length calibration

### Wide measuring range and extensive accessories

The wide measuring range enables the usage of cell holders with a length of max 100 mm. This also enables measurements with very low concentrations. There are 4 different cell holders/sample changers available, which can be replaced very easily:

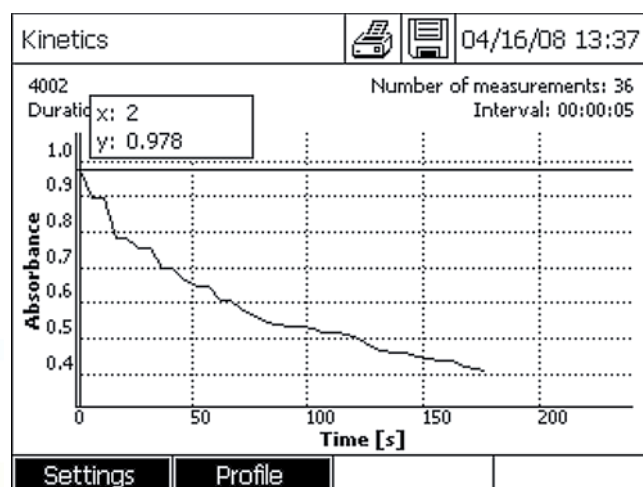
- single cell holder, 10 mm (is included in the scope of delivery), thermostatable
- single cell holder 100 mm
- single cell holder, 10 mm thermostatable (peltier)
- automatic sample changer, 5+1



## “Soft” facts

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 analytics.

Home (admin)	02/25/08 15:09		
<div style="background-color: black; color: white; padding: 5px; margin-bottom: 5px;">Concentration</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Absorbance / % Transmission</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Multi wavelengths</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Spectrum</div> <div style="border: 1px solid black; padding: 5px;">Kinetics</div>			
General setup	Logout	AQA	Info

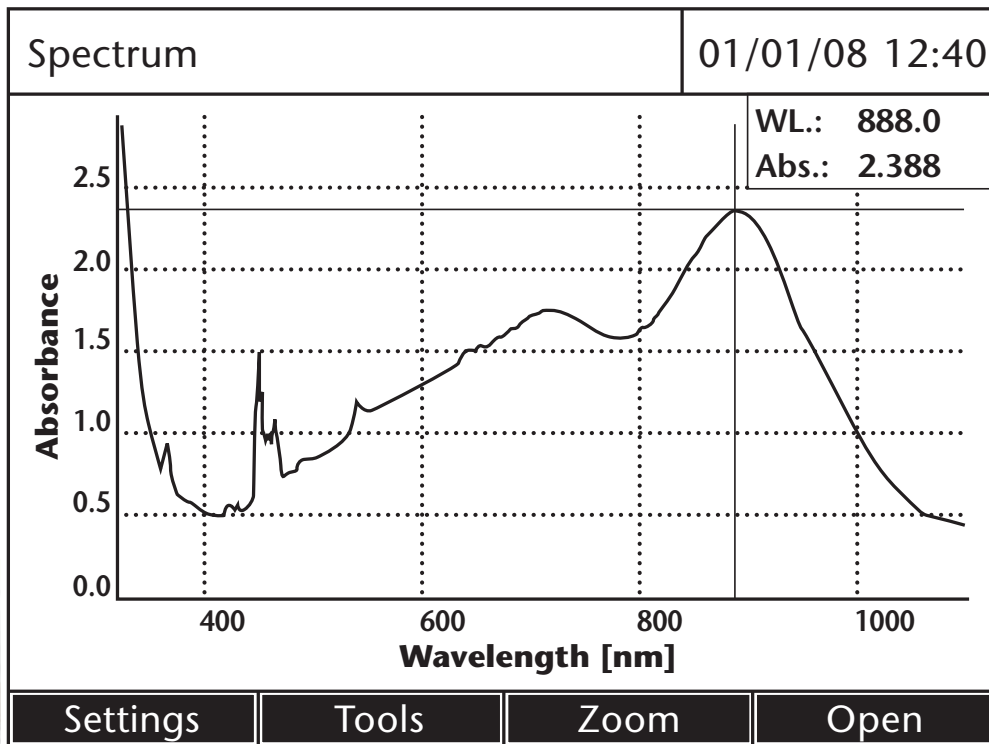


With the **multi wavelength analytics** up to 4 absorption values with different wavelengths can be measured and saved. For each application you have the possibility to programme an own optimized method. By using own programmed methods, the evaluation of the measuring results becomes easier.

The determination of the reaction time values is enabled through the **kinetics** programme section. The kinetics measurement can be stored and in the following evaluated using the cursor.

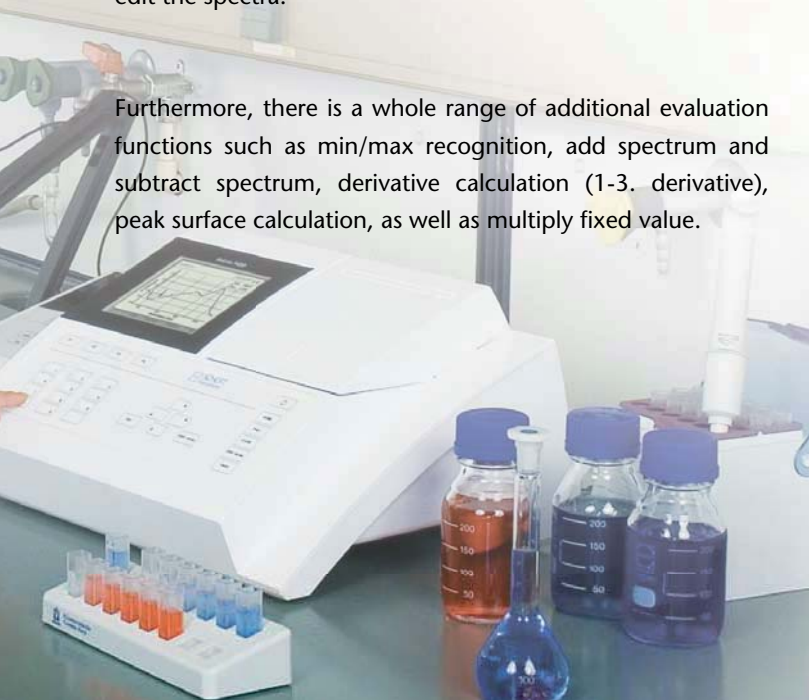
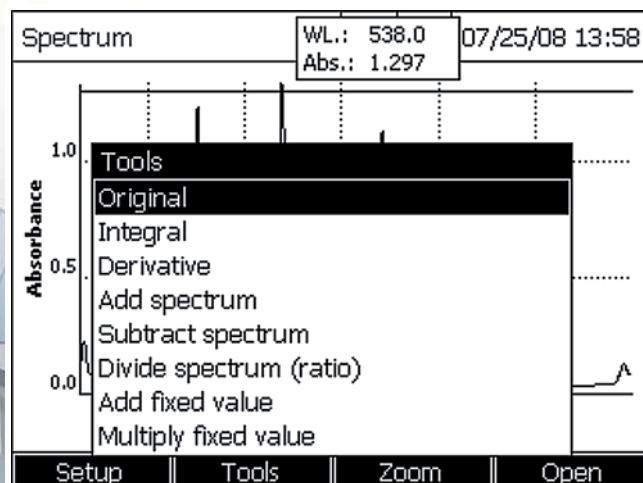
Edit method (5 of 6)	02/25/08 15:09
Number:	2002
Name:	PROT
Version:	1.0
Citationform:	Protein
Unit:	mg/ml
Resolution:	0.1
Cell:	10 mm
Back	Next

Edit method (6 of 6)	02/25/08 15:09
Function:	$1.550 * A(280 \text{ nm}) - 0.757 * A(260 \text{ nm})$
R=	1.000
Back	Next



Whenever the optimal wavelength for the determination of the concentration is unknown or the purity of a solution is to be determined, the adding of a **spectrum** becomes necessary. By using the zoom function and the cursor it is quite easy to edit the spectra.

Furthermore, there is a whole range of additional evaluation functions such as min/max recognition, add spectrum and subtract spectrum, derivative calculation (1-3. derivative), peak surface calculation, as well as multiply fixed value.



# Technical Specifications

## Software

Concentration	From 0 to 10 standards with interpolations. 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 – with USB stick: limited to the size of the USB Stick
Methods	> 100 methods

## 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	< 0.1 % at 220, 340 and 400 nm
Display	graphic display with backlit, 320x240 pixel	
Update	via internet and USB Stick	
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, cell holder (thermostatable), cell holder 100 mm	

# Ordering Information

Type No.	Order No.	Product	Description
UviLine 9100-EU	285700100	Spectrophotometer	UviLine 9100, single beam spectro photometer, 4 nm with a measuring range from 320 to 1100 nm and EU-power cord
UviLine 9100-US	285700110	Spectrophotometer	UviLine 9100, single beam spectro photometer, 4 nm with a measuring range from 320 to 1100 nm and US-power cord
UviLine 9400-EU	285700120	Spectrophotometer	UviLine 9400, single beam spectro photometer, 4 nm with a measuring range from 190 to 1100 nm and EU-power cord
UviLine 9400-US	285700130	Spectrophotometer	UviLine 9400, single beam spectro photometer, 4 nm with a measuring range from 190 to 1100 nm and US-power cord
SZ 2100	285700200	Automatic cell changer	5+1 cell changer, controlled from UviLine
SZ 2110	285700210	Cell holder	Single, 10 – 100 mm
SZ 2120	285700220	Cell holder	Single, 20 mm
SZ 2130	285700230	Cell holder	Single, 10 mm, (included in delivery of all UviLine)
SZ 2140	285700240	Cell holder	Single 10 mm, thermostatable
SZ 2150	285700250	Sipper	controlled from UviLiner
SZ 2160	285700260	Cell holder	Single 10 mm, thermostatable (Peltier)

