EN

UV / VIS Spectrophotometer

Single Beam
Double Beam
NANO

made in Germany

EMCLAB instruments - Germany

Product Overview

							
	page 5	page 6	page 7	page 8	page 9	page 10	page 11
Model	**EMC-11S-V**	**EMC-11S-UV**	**EMC-11-UV**	**EMC-18S-UV**	**EMC-61PC-UV**	**EMC-61PCS-UV**	**EMC-NANO 2**
Single beam	✓	✓	✓	✓			✓
Double beam					✓	✓	
Spectral bandwidth	4 nm	4 nm	4 nm	2 nm	1.8 nm	0.5/1/2/4/5 nm	4 nm
Wavelength range	325-1000 nm	200-1000 nm	200-1000 nm	190-1100 nm	190-1100 nm	190-1100 nm	190-1100 nm
Calibration certificate	✓	✓	✓	✓	✓	✓	✓
Cell holder positions	4	4	4	4	4+1	4+1	1
IQ/OQ/PQ	○	○	○	○	○	○	○
PC Software (Windows®)							
EMC-λ Lambda Software (page 18)	✓	✓	✓	✓			✓
ANALYST software (page 19)					✓	✓	
Audit Trail software (page 15)	○	○	○	○	○	○	○
Accessories (page 12)							
Peltier/Sipper plug in				○	○	○	
8-position cell changer				○	○	○	
Cell changer up to 50mm	○	○	○	○	○	○	○
Cell changer up to 100mm	○	○	○	○	○	○	○
Calibration filter set	○	○	○	○	○	○	○
Article No.	800000010	800000005	800000016	800000027	800000031	800000028	800000018

✓ = included
○ = optional

EMCLAB Spectrophotometers are tested with DAkkS (German body of accreditation) certified UV/VIS Reference Materials NIST traceable:

- **Photometric Accuracy**
- **Wavelength Accuracy**
- **Spectral Resolution**
- **Stray Light**

All EMCLAB Spectrophotometers are supplied with EMCLAB Works Calibration Certificate

Visible Spectrophotometer EMC-11S-V

Features:

- Color TFT screen
- Self-check system
- Fast choose wavelength
- Auto Zero and Blank
- Sample compartment for different cell holders
- Incl. PC-Software EMC-λ Lambda (Wavelength Measurement, Spectrum Scan, Quantitative Measurement, Kinetic Measurement, DNA/RNA Measurement)
- Incl. EMCLAB Works Calibration Certificate

Our lightest spectrophotometer is especially popular for use in education due to its easy operation and simple functionality. It covers standard photometric and quantitative applications. With the PC software EMC-λ Lambda, kinetic measurements and wavelength scans can also be performed with the instrument.

Model	EMC-11S-V
Wavelength Range	325-1000 nm
Spectral Bandwidth	4 nm
Optical System	Single Beam, grating 1200 lines/mm
Wavelength Accuracy	±2 nm
Wavelength Repeatability	1 nm
Photometric Accuracy	≤±0.5 % T or ±0.004A@1A
Photometric Range	0-200 % T, -0.3 - 3A 0-1999 conc.
Photometric Repeatability	≤0.2 % T
Photometric Mode	T, A, C, F
Stray Light	0.2 % T
Stability	±0.004A/h@500 nm
Baseline Flatness	±0.001A (200-1000 nm)
Noise	0.003A@500 nm
Detector	Silicone Photodiode
Display	Color TFT screen
Central beam height	15 mm
Standard Cell Holder	4-position cell holder 10x10 mm
Light Source	Tungsten lamp
Output	USB port & Parallel port for printer
Power Requirement	AC 85V~265V 50/60 Hz
Dimensions (LxWxH)	440 x 350 x 200 mm
Weight	8 kg
Article No.	800000010

UV/VIS Spectrophotometer EMC-11S-UV

Features:

- Color TFT screen
- Self-check system
- Fast choose wavelength
- Auto Zero and Blank
- Sample compartment for different cell holders
- Incl. PC-Software EMC-λ Lambda (Wavelength Measurement, Spectrum Scan, Quantitative Measurement, Kinetic Measurement, DNA/RNA Measurement)
- Incl. EMCLAB Works Calibration Certificate

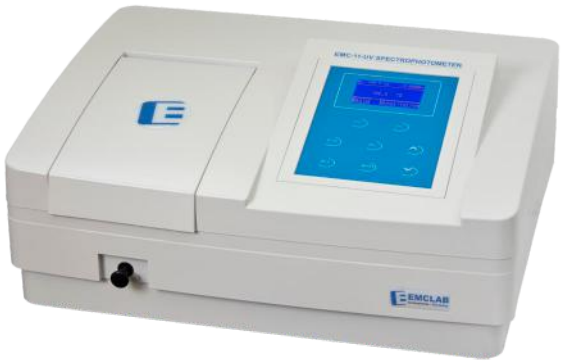
The additionally installed deuterium lamp enables the 11S-UV, in contrast to the 11S-V, to also measure within the UV range of the light spectrum. It is therefore suitable for applications that need to cover a greater variability of samples. Kinetic measurements and wavelength scans can also be performed with the instrument via the EMC-λ Lambda PC software.

Model	EMC-11S-UV
Wavelength Range	200-1000 nm
Spectral Bandwidth	4 nm
Optical System	Single Beam, grating 1200 lines/mm
Wavelength Accuracy	±2 nm
Wavelength Repeatability	1 nm
Photometric Accuracy	≤±0.5 % T or ±0.005A@1A
Photometric Range	0-200 % T, -0.3 - 3A 0-19999 conc.
Photometric Repeatability	≤0.2 % T
Photometric Mode	T, A, C, F
Stray Light	0.2 % T
Stability	±0.004A/h@500 nm
Baseline Flatness	±0.001A (200-1000 nm)
Noise	0.003A@500 nm
Detector	Silicone Photodiode
Display	Color TFT screen
Central beam height	15 mm
Standard Cell Holder	4-position cell holder 10x10 mm
Light Source	Tungsten & Deuterium lamp
Output	USB port & Parallel port for printer
Power Requirement	AC 85V~265V 50/60 Hz
Dimensions (LxWxH)	440 x 350 x 200 mm
Weight	9 kg
Article No.	800000005

UV/VIS Spectrophotometer EMC-11-UV

Features:

- LCD screen (128*64 dots)
- Self-check system
- Auto Zero and Blank
- Sample compartment for different cell holders
- Save the results
- Up to 200 methods & 100 standard curves can be stored
- Incl. PC-Software EMC-λ Lambda (Wavelength Measurement, Spectrum Scan, Quantitative Measurement, Kinetic Measurement, DNA/RNA Measurement)
- Incl. EMCLAB Works Calibration Certificate



The 11-UV is widely used in colleges and enterprises for general quantitative analysis and experiments. The instrument's internal storage offers space for up to 100 standard curves and 200 methods. Via the PC software EMC-λ Lambda, kinetic measurements and wavelength scans can also be performed with the instrument.

Model	EMC-11-UV
Wavelength Range	200-1000 nm
Spectral Bandwidth	4 nm
Optical System	Single Beam, grating 1200 lines/mm
Wavelength Accuracy	±2 nm
Wavelength Repeatability	1 nm
Photometric Accuracy	≤0.5 % T or ±0.003A@1A
Photometric Repeatability	≤0.2 % T
Photometric Range	0-200 % T, -0.3 - 3A, 0-9999 Conc.
Stray Light	0.2 % T
Stability	±0.002A/h@500 nm
Noise	0.003A@500 nm
Detector	Silicone Photodiode
Display	LCD 128*64 dots
Central beam height	15 mm
Standard Cell Holder	4-position cell holder 10x10 mm
Light Source	Tungsten & Deuterium lamp
Output	USB port & Parallel port (printer)
Power Requirement	AC 110/230V 50/60 Hz
Dimensions (LxWxH)	490 x 376 x 220 mm
Weight	14 kg
Article No.	800000016

UV/VIS Spectrophotometer EMC-18S-UV

Features:

- Color TFT screen
- Self-check system
- Auto Zero and Blank
- Sample compartment for different cell holders
- Saves the results
- Up to 200 methods & 100 standard curves can be stored
- Incl. PC-Software EMC-λ Lambda (Wavelength Measurement, Spectrum Scan, Quantitative Measurement, Kinetic Measurement, DNA/RNA Measurement)
- Incl. EMCLAB Works Calibration Certificate

The 18S-UV combines the easy use of the S-series with more comprehensive features of the larger instruments. Wavelength scans and kinetic measurements can be performed directly with the instrument. The instrument's internal storage provides space for up to 100 standard curves and 200 methods.

Model	EMC-18S-UV
Wavelength Range	190-1100 nm
Spectral Bandwidth	2 nm
Optical System	Single Beam, grating 1200 lines/mm
Wavelength Accuracy	±0.5 nm
Wavelength Repeatability	0.3 nm
Photometric Accuracy	≤±0.5 % T or ±0.005A@1A
Photometric Range	0-200 % T, -0.3 - 3A 0-9999 conc.
Photometric Repeatability	≤0.2 % T
Photometric Mode	T, A, C, F
Stray Light	0.05 % T
Stability	±0.001A/h@500 nm
Baseline Flatness	±0.001A (200-1000 nm)
Noise	0.003A@500 nm
Detector	Silicone Photodiode
Display	TFT color screen
Central beam height	15 mm
Standard Cell Holder	4-position cell holder 10x10 mm
Light Source	Tungsten & Deuterium lamp
Output	USB port & Parallel port for printer
Power Requirement	AC 85 V~265 V 50/60 Hz
Dimensions (LxWxH)	490 x 380 x 220 mm
Weight	11 kg
Article No.	800000027

UV/VIS Spectrophotometer EMC-61PC-UV

Features:

- Double Beam
- LCD screen (320*240 dots)
- Self-check system
- Auto Zero and Blank
- Sample compartment for different cell holders
- Incl. USB memory stick for methods and results
- Incl. PC software ANALYST (Wavelength Measurement, Wavelength Scan, Quantitative Measurement, Kinetic Measurement, DNA/Protein Measurement)
- Incl. EMCLAB Works Calibration Certificate

With this device, samples and reference are measured simultaneously. This ensures fast and precise measurement results. Variables and values can be entered accurately via the keypad and graphs can be shown directly on the large display. Methods and measurement results can be saved on the instrument's internal storage or an external USB stick.
This instrument features a port for the optionally available Peltier/Sipper System (p. 13).

Model	EMC-61PC-UV
Wavelength Range	190-1100 nm
Spectral Bandwidth	1.8 nm
Optical System	Double Beam, grating 1200 lines/mm
Wavelength Accuracy	±0.3 nm
Wavelength Repeatability	0.2 nm
Photometric Accuracy	≤±0.5 % T or ±0.005A@1A
Photometric Range	0-200 % T, -0.3 - 3A
Photometric Repeatability	≤0.001A (0-0.5A), ≤0.002A (0-0.5A) ≤0.15 % T (0-100%)
Scan Speed	Hi, MED, LOW, MAX. 3000 nm/min
Stray Light	0.05 % T
Stability	±0.001A/h@500 nm
Baseline Flatness	±0.001A (200-1000 nm)
Noise	0.0003A@500 nm
Detector	Silicone Photodiode
Display	LCD 320*240 dots
Central beam height	15 mm
Standard Cell Holder	4-position cell holder + 1 reference 10x10 mm
Light Source	Tungsten & Deuterium lamp
Output	USB port A for USB memory stick USB port B for PC connectivity Parallel port for printer
Power Requirement	AC 110/230V 50/60 Hz
Dimensions (LxWxH)	589 x 428 x 240 mm
Weight	22 kg
Article No.	800000031

UV/VIS Spectrophotometer EMC-61PCS-UV

Features:

- Double Beam
- Variable bandwidths 0.5/1/2/4/5 nm
- LCD screen (320*240)
- Self-check system
- Auto Zero and Blank
- Sample compartment for different cell holders
- Incl. USB memory stick for methods and results
- Incl. PC software ANALYST (Wavelength Measurement, Wavelength Scan, Quantitative Measurement, Kinetic Measurement, DNA/Protein Measurement)
- Incl. EMCLAB Works Calibration Certificate

Similar to the 61PC-UV, the 61PCS-UV is a double beam photometer, making it particularly fast and precise. Due to the variable bandwidth, the 61PCS-UV offers maximum freedom in the selection of methods. It is therefore particularly suitable for use in the pharmaceutical sector.

Model	EMC-61PCS-UV
Wavelength Range	190-1100 nm
Spectral Bandwidth	0.5/1/2/4/5 nm
Optical System	Double Beam, grating 1200 lines/mm
Wavelength Accuracy	±0.3 nm
Wavelength Repeatability	0.2 nm
Photometric Accuracy	≤±0.5 % T or ±0.005A@1A
Photometric Range	0-200 % T, -0.3 - 3A
Photometric Repeatability	≤0.001A (0-0.5A), ≤0.002A (0-0.5A) ≤0.15 % T (0-100%)
Scan Speed	Hi, MED, LOW, MAX. 3000 nm/min
Stray Light	0.05 % T@220, 340 nm
Stability	±0.001A/h@500 nm
Baseline Flatness	±0.001A (200-1000 nm)
Noise	0.0003A@500 nm
Detector	Silicone Photodiode
Display	LCD 320*240
Central beam height	15 mm
Standard Cell Holder	4-position cell holder + 1 reference 10x10 mm
Light Source	Tungsten & Deuterium lamp
Output	USB port A for USB memory stick USB port B for PC connectivity Parallel port for printer
Power Requirement	AC 110/230V 50/60 Hz
Dimensions (LxWxH)	589 x 428 x 240 mm
Weight	24 kg
Article No.	800000028

UV/VIS Spectrophotometer EMC-NANO 2

Features:

- LCD screen (320*240 dots)
- Self-check system
- Auto Zero and Blank
- Unique Flip cell holder 2 in 1 for NANO volume and standard cells
- 0.2 ~ 2.5 µl sample volume for DNA, RNA, PCR and protein
- Incl. USB memory stick for methods and results
- Incl. PC-Software EMC-λ Lambda
  (Wavelength Measurement, Wavelength Scan, Quantitative Measurement, Kinetic Measurement, DNA/RNA Measurement)
- Incl. EMCLAB Works Calibration Certificate

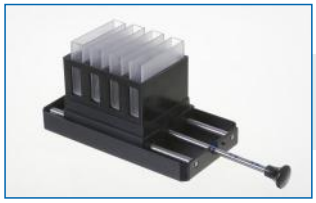
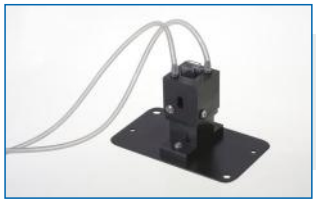
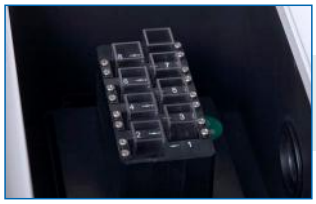
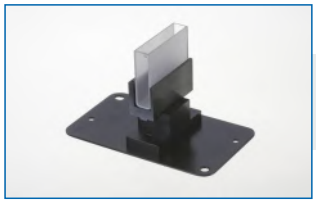
Our new EMC-NANO 2 for measuring samples with nano volumes extends the modern user-friendliness of the 18S-UV with our exclusive nano flip cell holder. This allows both standard samples and nano volumes to be measured easily and accurately. Wavelength scans and kinetic measurements can be performed directly with the instrument.

The unique Flip cell holder for NANO volume and standard cells:

- Simple to use
- NANO cell holder optical path length 0.5 mm
- Cell holder for standard cells optical path length 10 mm
- Horizontal light path - high precision - no loss of energy

Model	EMC-NANO 2
Wavelength Range	190-1100 nm
Spectral Bandwidth	4 nm
Optical System	Single Beam, grating 1200 lines/mm
Wavelength Accuracy	±0.5 nm
Wavelength Repeatability	0.3 nm
Photometric Accuracy	≤0.5 % T or ±0.004A@1A
Photometric Repeatibility	≤0.001A (0-0.5A), ≤0.002A (0-0.5A) ≤0.5 % T (0-100%)
Photometric Range	0-200 % T, -0.3 - 3A, 0-9999 Conc.
Scan Speed	Hi, MED, LOW – MAX: 3000nm/min
Stray Light	0.05 % T@220, 340 nm
Stability	±0.002A/h@500 nm
Baseline Flatness	±0.002A (200-1000 nm)
Noise	0.0005A@500 nm
Detector	Silicone Photodiode
Display	LCD 320*240 dots
Central beam height	15 mm
Flip Cell Holder	0.2~2.5 µl and cell 10 mm path length
Light Source	Tungsten & Deuterium lamp
Output	USB port A for USB memory stick USB port B for PC connectivity Parallel port for printer
Power Requirement	AC 85 V~265 V 50/60 Hz
Dimensions (LxWxH)	490 x 370 x 220 mm
Weight	14 kg
Article No.	800000018

Accessories

Cell Holder	Description	Art. No.
	4-position cell holder for cells 10x10 mm, without slider	700000005
	4-position cell holder for cells up to 50 mm, without slider 4-position cell holder for cells up to 100 mm, without slider	700000006 700000004
	1-position cell holder for cells 10x10 mm	700000008
	1-position cell holder water-jacketed for cells 10x10 mm 4-position cell holder water-jacketed for cells 10x10 mm, without slider (not for EMC-11 series)	700000009 700000010
	8-position auto cell changer for cells 10x10 mm (not for EMC-11 series)	700000011
	1-position cell holder for cells up to 100 mm	700000012
	1-position cell holder for solid samples up to 2-5 mm thickness 2-position cell holder for solid samples up to 2-5 mm thickness	700000013 700000014

Without the illustrated accessories (slider, plates, cells) / other accessories on request

Accessories

Peltier/Sipper System	Description	Art. No.
	Peltier Sipper System EMC-PSA 1, 10°C - 60°C, incl. thermostat-controlled 1-position cell holder and flow through cell 10x10 mm (not for EMC-11 series)	700000086
	Peltier System EMC-PSA 2, 10°C - 60°C, incl. thermostat-controlled 1-position cell holder for cells 10x10 mm (not for EMC-11 series)	700000087
	Sipper System EMC-PSA 3, incl. 1-position cell holder and flow through cell 10x10 mm (not for EMC-11 series)	700000088

Fig. EMC-PSA 1

Lamps	Description	Art. No.
	Halogen (Tungsten) lamp 6V/10W (only for EMC-11S series)	700000078
	Halogen (Tungsten) lamp 12V/20 W (only for EMC-11-UV & EMC-18S-UV)	700000079
	Halogen (Tungsten) lamp 12V/20W (only for EMC-6 series)	700000080
	UV Deuterium lamp type 1	700000081
	UV Deuterium lamp type 2 for EMC-11S-UV	700000082

Cells	Description	Art. No.
	Glass / Quartz glass cells on request	

Without the illustrated accessories (slider, plates, cells) / other accessories on request

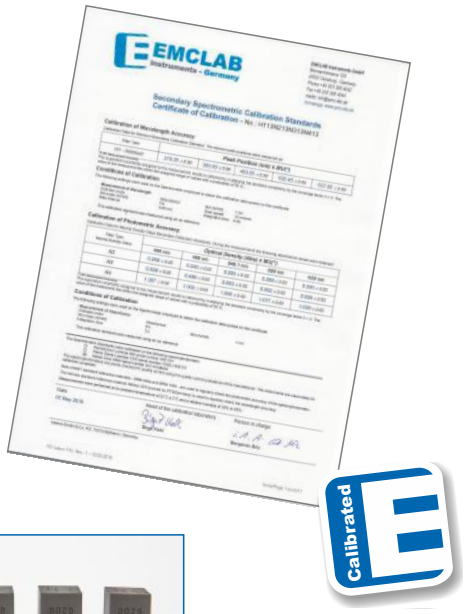
Spectrophotometer Reference Cells

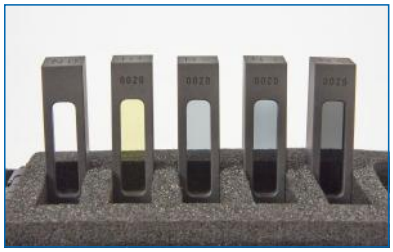
UV/VIS Calibration filter set with EMCLAB Works Calibration Certificate for maintenance and service

The EMC-SET-100 for testing the wavelength accuracy and photometric accuracy enables the user to check their measurement results. The EMC-SET-100 is supplied with EMCLAB Works Calibration Certificate of Secondary Spectrometric Calibration Standards.

UV/VIS reference materials for testing:

- Wavelength accuracy
- Photometric accuracy



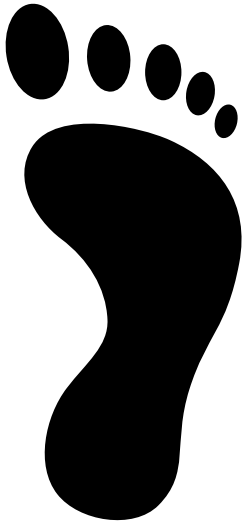


Glass filter set for testing wavelength accuracy (W) and photometric accuracy (A):

Art. No.	Filter	Parameter	Wavelength (nm)
700000045	Holmium Oxide glass filter H1	W*	279; 361; 453; 536; 638 nm
	Neutral density glass filter N2, 0.25 Abs.	A*	440; 465; 546.1; 590; 635 nm
	Neutral density glass filter N3, 0.5 Abs.	A*	440; 465; 546.1; 590; 635 nm
	Neutral density glass filter N4, 1.0 Abs.	A*	440; 465; 546.1; 590; 635 nm
	Empty filter mount N0		

*A= Wavelength for absorbance
*W= Wavelength for wavelength accuracy

EMCLAB Audit Trail Software (Windows®)
provides secure access of storage results and features compliant with 21 CFR Part 11.



System access requires a user name and password which are assigned by the workgroup manager/administrator. Individual user access levels determine the access to administrative tools which include instrument configuration, analysis applications, user setup, setup and security policies as well as system and application history logs.

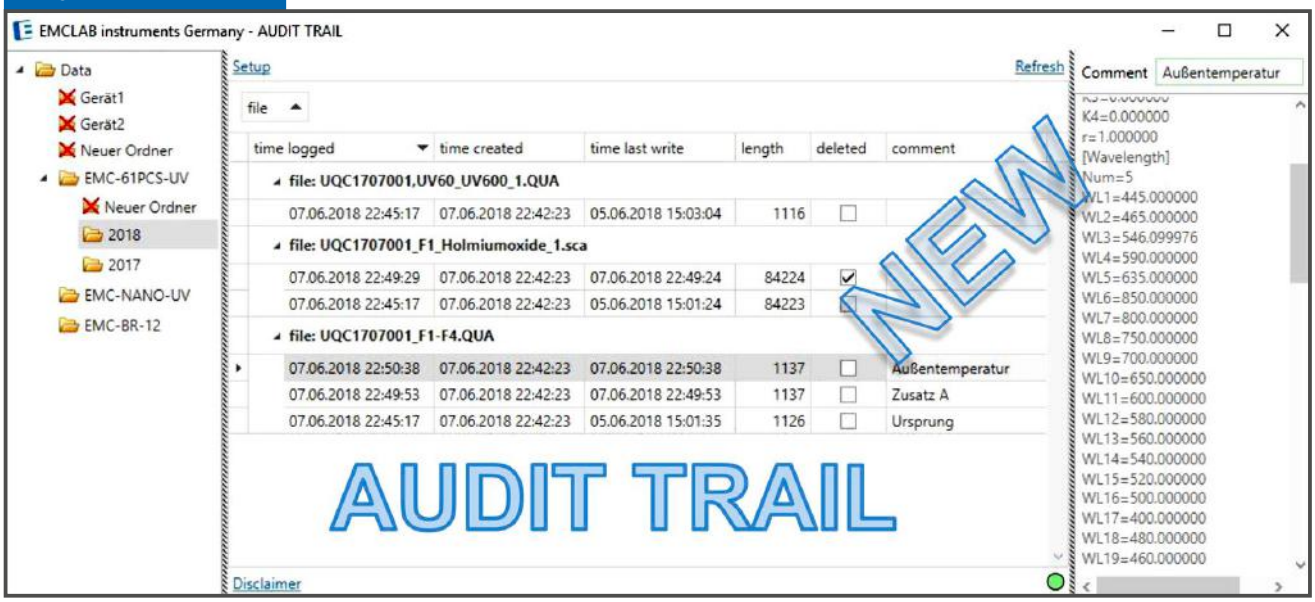
For every file version the recorded information is saved (time logged, time created, time last written, deleted, user and manually recorded comments).

EMCLAB Audit Trail is made for

- Monitoring of file modification
- Documentation of changes made by the user
- In specific directories
- Including subdirectories

Article No. 810000010

AUDIT TRAIL



On-Board Software

EMC-11S-V/UV

Absorbance measurement Measure the absorbance value of the sample.

Transmissivity measurement Measure the transmission of the sample.

Concentration measurement against a standard sample
A standard curve through zero is defined by measuring the absorbance value of a standard sample and entering the corresponding concentration. The concentration of the unknown sample is calculated using the standard curve.

Concentration measurement using the equation coefficients
A standard curve is defined by entering the coefficients K and B of the standard curve equation C=K*A+B, and the standard curve is used to measure the concentration of the unkown sample.

Energy measurement For the verification of light source, monochromator and detector.

System General system information

Display

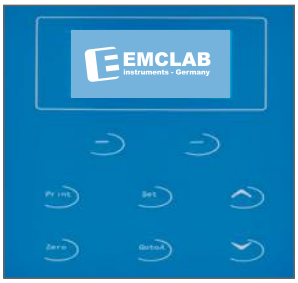
Main menu

EMC-11-UV

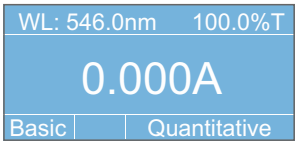
Basic
Measurements of absorbance, transmission or concentration.
Display and save up to 200 values.

Quantitative
A standard sample with known concentration is used to calculate the concentration of the measured sample.

Utility
Switch lamps on/off, adjust test mode, dark current refresh, wavelength reset, version information



Display



Main menu

EMC-18S-UV and EMC-NANO 2

Photometry Measure the absorbance or transmission value of the sample.

Quantitation The concentration of the unknown sample is calculated using a standard curve.

a) Standard sample: Measure or enter the absorbance value of a standard sample and enter the corresponding concentration value to define a standard curve.

b) Equation coefficients: A standard curve is defined by entering the coefficients K and B of the standard curve equation C=K*A+B.

Kinetics Measure the photometric value change with time of the sample.

System General system information and settings (e.g. turn lamps on/off, set date and time).

Display

Main menu

EMC-6-series

Main menu: The on-board software includes the following functions: photometry (basic mode), quantitation, wavelength scan, kinetics, DNA/Protein, multiwavelength, system utility.

Multi Wavelength: Measure multiple samples with up to 10 wavelengths.

Spectrum Scan: Choose scan intervals (0.5 to 5 nm), scan speed, as well as the photometric mode to display the spectrum (wavelength/absorbance or wavelength/transmission).

Post processing options include rescaling of axes, curve tracking and determining peaks.

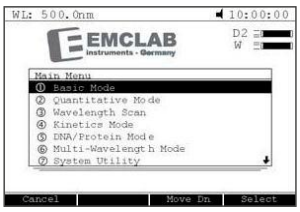
Quantitative Measurement: Define a standard curve using up to 10 standards and choose from 4 curve fitting methods:
1. Linear function
2. Linear function through zero
3. Square function
4. Cubic function

Kinetic Measurement: Absorbance vs time diagrams are displayed in real time. Choose time intervals (0.1 to 60 sec.), delay time as well as the photometric mode to display the curve (absorbance/time or transmission/time).

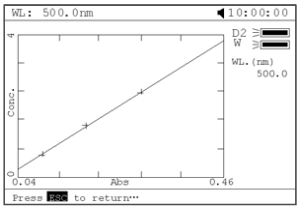
Post processing options include rescaling of axes, curve tracking and determining the part of the curve required for the rate calculation. The reaction rate is calculated with a linear regression algorithm.

DNA/RNA Measurement: Determine DNA/protein concentration at 260 nm/280 nm or 260 nm/230 nm with optional subtracted absorbance at 320 nm.

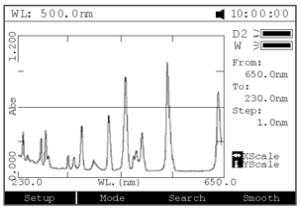
Optionally other wavelengths and factors may be entered.



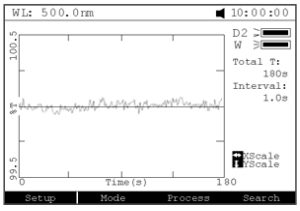
Main menu



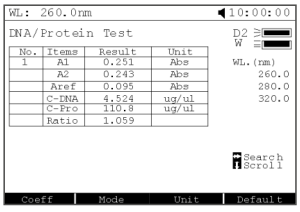
Quantitative Measurement



Wavelength scan



Kinetics



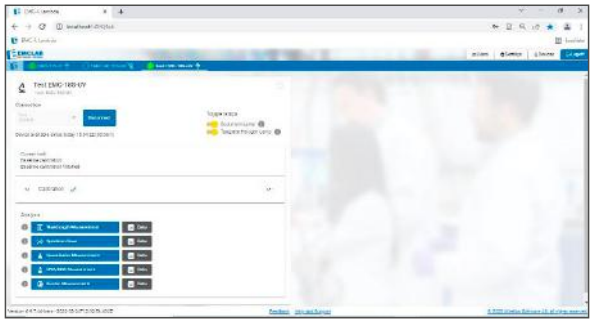
DNA/Protein

PC-Software EMC-λ Lambda for the series EMC-11, EMC-11S, EMC-18S and EMC-NANO 2

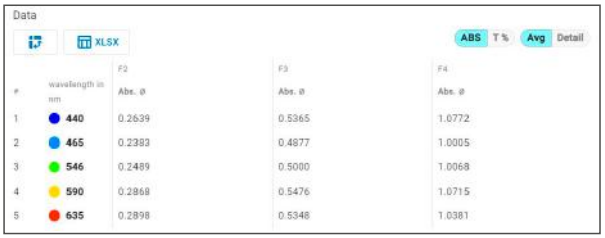
The PC-Software is based on Microsoft Windows. EMC-λ Lambda is able to navigate our spectrophotometers via the built-in USB-port. It advances the features of the devices and simplifies the operation by converting your application into easy to set up tasks. The tasks you can choose from include the following:

- **Wavelength Measurement**
  With this method it is possible to measure the absorption or transmission of a sample with multiple wavelengths. You may select up to 20 wavelengths and multiple samples per task.
- **Spectrum Scan**
  This scan enables you to measure the absorption or transmission of a sample in a specific wavelength range. In accordance with your instrument's specifications, you can choose wavelength range, wavelength intervals, and scan speed.
- **Quantitative Measurement**
  This method defines the concentration of a solution in a specific substance. Generate your standard curves by entering parameters or measuring standard samples. To measure your samples, choose any of the saved standard curves from the storage or establish a new one.
- **DNA/RNA Measurement**
  With this measurement the concentration for DNA/RNA samples can be measured. You may use common methods or enter parameters to set up a personalized method.
- **Kinetic Measurement**
  This method allows you to measure the absorption of a sample at a wavelength over a certain period of time. The results can be used to identify the kinetics of chemical reactions.

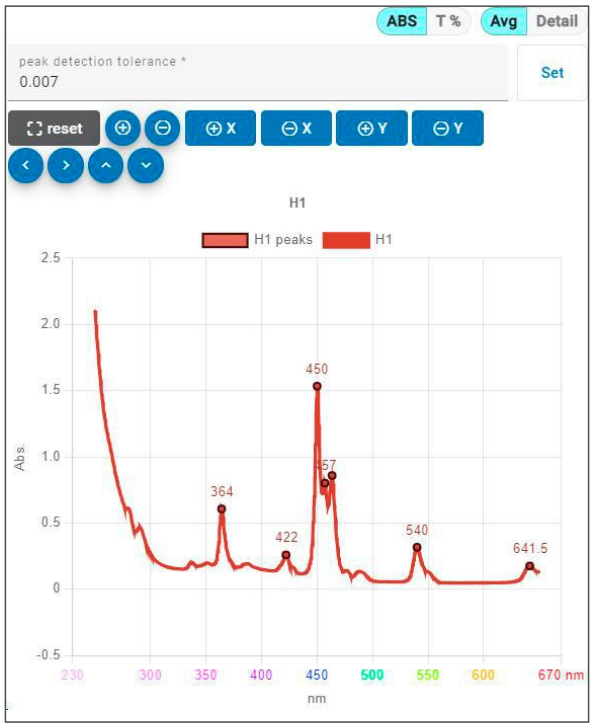
Audit Trail PC-Software according to FDA 21 CFR Part 11 optionally available.



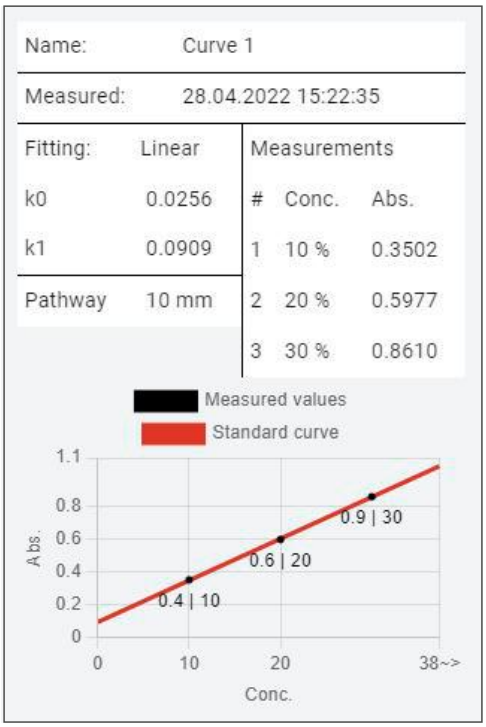
Main Menu



Multi Wavelength Scan: Data



Spectrum Scan: Chart



Standard curve

PC software ANALYST for EMC-6 series

The Analyst PC software enhances the functions and data processing and expands the storage capacity.
The software includes the following functions:

Wavelength Measurement: Up to 20 different wavelengths can be entered to measure a number of samples.

Spectrum Scan: Choose scan intervals (0.1 to 5 nm), scan speed as well as the photometric mode to display the spectrum (wavelength/absorbance or wavelength/ transmission).

Post processing options include i.a. rescaling of axes, curve smoothing, determining peaks and calculating derivatives.

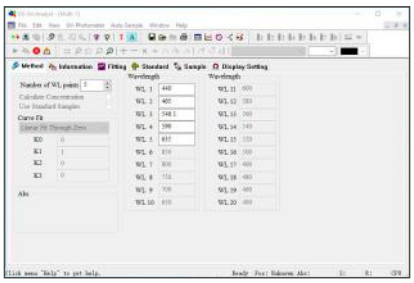
Quantitative Measurement: Select only one wavelength in the 'method ' tab in order to quantitatively calculate the measurement results using a standard curve. Enter or measure up to 20 standards to define a standard curve or enter the function of the standard curve using coefficients. Choose from 4 curve fitting methods:
1. Linear function
2. Linear function through zero
3. Square function
4. Cubic function

Kinetic Measurement: Absorbance vs time diagrams are displayed in real time. Choose time intervals (0.1 to 60 sec.), delay time as well as the photometric mode to display the curve (absorbance/ time or transmission/time).

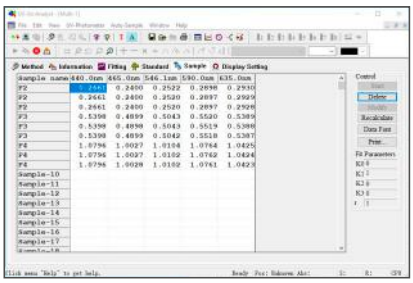
Post processing options include rescaling of axes, curve tracking and determining the part of the curve required for the rate calculation. The reaction rate is calculated with a linear regression algorithm.

DNA/RNA Measurement: Determiniation of the DNA/protein concentration of the sample using common methods. Optionally other wavelengths and factors may be entered.

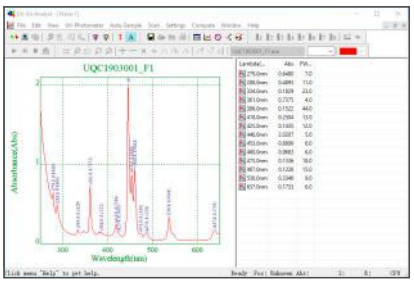
Audit Trail PC software compliant with FDA 21 CFR Part 11 optionally available.



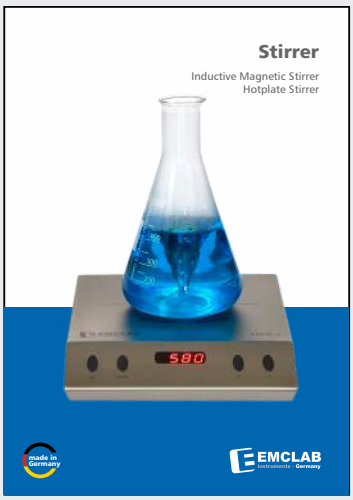
Configuration



Results



Spectrum Scan



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