2 Technical data

Photometer

Optical system:	Absorption single-beam photometer with reference beam and several fixed wavelengths
Irradiation source:	Xenon flash lamp
Spectral dispersion:	Holographic concave grating
Measuring wavelengths:	Xe 230, 260, 280, 320, 562, 595 nm
Wavelength selection:	Method-dependent, program-controlled
Spectral bandwidth:	5 nm at 230 to 320 nm 7 nm at 562 to 595 nm
Wavelength systematic error:	± 1 nm at 230 to 280 nm ± 2 nm at 320 to 595 nm
Wavelength random error:	≤ 0.1 nm
Photometric measuring range:	Quartz glass cuvette: 0.000 to 3.000 A UVette® (Eppendorf): 2.5 A at 230 nm 2.6 A at 260 nm 2.8 A at 280 nm 2.9 A at 320 nm
Photometric random error:	≤ 0.002 A at 0 A ≤ 0.005 A at 1 A
Photometric systematic error:	± 1 % at 1 A
Accuracy of reading:	0.001 A
Stray-light proportion:	< 0.05 %
Radiation detector:	Silicium photo diodes

Measuring procedures

Measuring procedure:	End-point against blank
Method-dependent calculation:	Absorbance Concentration via factor Concentration via Warburg formula Concentration via calibration with 1 to 10 standards One-point calibration (1 standard) Linear regression (2 to 10 standards) Non-linear regression (3rd degree polynomer; 4 or 5 to 10 standards; see Section 12, "Calculation") 1 x, 2 x or 3 x determination For nucleic acids: Ratio 260/280 Ratio 260/230 Molar concentration Total yield

Memory

Method memory:	12 preprogrammed, modifiable method programs
Calibration memory:	For all calibration procedures
Results memory:	For 100 results with absorbance and ratio values, sample number, sample dilution, date and time (calendar up to 2090)

2 Technical data

Operation

Cuvette material:	dsDNA, ssDNA, RNA, Oligo, Protein: Quartz glass or plastic (UVette® from Eppendorf) OD 600, Bradford, Lowry, BCA: Glass or plastic
Cuvette shaft:	12.5 mm x 12.5 mm, not temperature-controlled
Overall height of cuvettes:	Min. 36 mm
Height of light beams in the cuvette:	8.5 mm
Light bundle in the cuvette:	Width: 1 mm Height: 1.5 mm
Keypad:	19 foil keys
Display:	Illuminated graphic display, 33 mm x 60 mm
User guidance:	English, French, German
Results output:	Via display and printer Absorbance, concentration, ratio

General data

Supply voltage:	100 to 240 V ± 10 %; 50 to 60 Hz ± 5 %
Overvoltage category:	II (IEC 61010-1)
Pollution degree:	2 (IEC 664)
Power requirement / power output:	Approx. 20 W in operation, approx. 10 W in Standby mode
Current consumption:	< 0.3 A
Permitted mains interruption:	Approx. 10 ms at 90 V Approx. 200 ms at 220 V
Fuses:	T 1 A / 250 V, 5 mm x 20 mm (2 pcs.)
Ambient conditions:	15 to 35 °C with defined precision and accuracy –25 to 70 °C when not in operation or when stored 15 to 70 % relative humidity Cannot be used in tropical climate Keep out of direct sunlight
Printer connection:	RS-232 C, serial, data format: 1 start bit, 8 data bits, no parity, 1 stop bit, 9600 Baud The printer that is connected must comply with the requirements of EN 60950 or UL 1950.
Standards and regulations:	Complies with VDE, CE, IEC 1010-1
Dimensions:	Width: 20 cm (packaged: 29 cm) Depth: 32 cm (packaged: 43 cm) Height: 10 cm (packaged: 20 cm)
Weight:	3 kg (packaged: 4,8 kg)

Technical specifications subject to change.