

Photometers, WINLAB®

WinLab Data Line Photometer for water analysis

The new LED-photometer with:

- Big spectral range from 380 to 810 nm
- High, photometric precision
- Flexibly usable for many reagent types
- Method memory for 150 calibration curves
- Operation instruction for reagents can be read directly from the display
- Complete documentation per data logging
- Includes software for documentation
- Robust, tested new housing, waterproof
- Backlit display
- Display cover made of glass, scratch-free

With new spectral range

Due to 9 LED and filter combinations, such as:

380 - 430 - 470 - 500 - 520 - 560 - 610 - 700 - 810 nm, a wide spectral range is available.

Free reagent selection

For many manufacturer reagents, e.g. AQUANAL by Sigma - Aldrich, Merck or Visicolor or others. We have many calibration curves available and can save them in your photometer!

Of course, you can do the same at any time, with the included software!

Method memory

With up to 150 calibration curves of different reagents.

Simple operation and much information from the display

The display informs you on every step on the right reagent dosage, each step can be read from the display!

High precision

The electro-optical accuracy within a wide range of extinctions from -0.500 to 2.000 lies at $\pm 1.5\%$.

Display

Back back-illumination and display cover made of scratch-proof mineral glass, the digit-size for the measurement display is 12 mm.

Furthermore, the display informs on date, time, measurement steps, article no. of the reagents used and of course all operational steps.

Data logging and interface

To save up to 1000 data records.

GLP-conform.

The following is documented per data record: date / time / wavelength / reagent used / measurement result / measurement number / location of measurement.

The serial wireless, waterproof IrDA-interface makes a trouble-free data transfer possible, also on-location!

Software

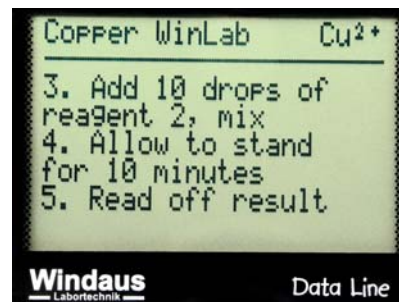
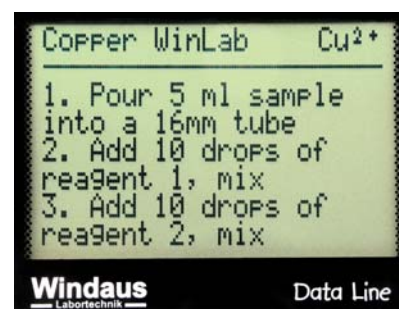
The software included in the scope of delivery offers many possibilities. This way, either calibration curves of the reagents can be selected, which are saved in the photometer memory, or brand-new, e.g. self-created curves! Theoretically, the photometer can work with only one calibration curve or with up to 150.

Housing

The photometer is mostly waterproof, especially in the cuvette duct! Here, the photometer is vastly protected against intruding liquids. The IrDA-interface is also waterproof!

Technical data:

Optics:	LED and filter
Wavelengths:	380 / 430 / 470 / 500 / 520 / 560 / 610 / 700 / 810 nm
Extinction range:	-0c500 to 3.000
Electro-optical accuracy:	in the range from -0.100 to 2.000 1.5% from Photometric accuracy $\pm 3\%$ (to filter)
Language selection, operation text:	German / English / Spanish / French or two other languages, e.g. Polish or Italian
Memory:	for up to 150 calibration curves incl. operation texts
Interface:	IrDA, as infrared interface
Data record memory:	up to 1000 data records
Graphic display:	128 x 64 Pixel, 60 x 40 mm size of the reading field Backlit, with scratch-proof mineral glass cover with calendar and time (automatic change to Day-light Savings Time)
Date/time:	
Power supply:	4 x batteries 1,5 V each (rechargeable by means of included charger)
Energy saving function:	automatic turn-off, according to selected turn-off time



- | Article | Order No. |
|---|--------------------|
| ① WinLab standard plastic transport case | 80 03 02540 |
- includes: WinLab Data Line Photometer with batteries – charger, software, 10 round cuvettes 16 mm, 2× sample tubes for dilutions, funnel, cleaning brush for cuvette, cuvette rack made of rigid foamed plastic, 2× syringes, IrDA-USB-adapter, cable 1 m long for USB interface

- | Article | Order No. |
|---|--------------------|
| ② WinLab photometer aluminium transport case | 80 03 02550 |
- includes: WinLab Data Line Photometer with battery charger, software, 10 round cuvettes 16 mm, 2 sample tubes for dilutions, funnel, cleaning brush for cuvette, cuvette rack for 25 cuvettes, 2× syringes, IrDA-USB-adapter, cable 1 m long for USB interface

Accessories

Article	Order No.
Cuvettes set	10 03 20405

consists of 10 cuvettes with screw-cap, Ø 16 mm

Reagents - Testkits

AQUANAL-plus / WINLAB mixture reagents for WinLab Data Line Photometer

Parameter	Measuring range mg/l	Order No.	PU pc/Pack
Aluminium	0.01 – 0.5	10 03 37565	200
Ammonium	0.05 – 3.0	10 03 20201	200
Cadmium	0.01 – 2.0	10 03 37472	140
Chlorine	0.1 – 5.0	10 03 37459	250
Chloride	1 – 50	10 03 20210	250
Chromium	0.005 – 1.0	10 03 20202	150
Cyanide	0.01 – 1.0	10 03 37443	150
Iron, low	0.02 – 0.3	10 03 37461	100
Iron WINLAB	0.05 – 6.0	10 03 20206	100
Iron, high	0.14 – 15	10 03 37444	150
Gold	0.1 – 5.0	10 03 37537	100
Hydrazine	0.01 – 2.0	10 03 37473	140
Copper WINLAB	0.1 – 12	10 03 20203	100
Copper	0.05 – 5.0	10 03 37464	75
Magnesium	100 – 1500	10 03 37466	60
Manganese	0.01 – 5.0	10 03 37446	100
Nickel	0.02 – 2.0	10 03 37447	125
Nitrate, low	0.1 – 30	10 03 20204	200
Nitrate, high	10 – 150	10 03 37448	200
Nitrite	0.01 – 2.0	10 03 20207	55
Peroxide	1 – 100	10 03 37474	140
Phenol	0.05 – 5.0	10 03 37467	300
Phosphate, low	0.01 – 5.0	10 03 37451	200
Phosphate WINLAB	0.2 – 10	10 03 20205	100
Phosphate, high	1 – 150	10 03 37463	200
Oxygen	0.5 – 10	10 03 37428	30
Silver	0.05 – 1.5	10 03 37538	200
Silicon	0.01 – 2.0	10 03 37452	150
Sulphate	50 – 400	10 03 37469	100
Sulphate WINLAB	20 – 1000	10 03 20220	100
Sulphide	0.05 – 2.0	10 03 37470	100
Sulphide WINLAB	0.05 – 2.0	10 03 20221	100
Zinc	0.01 – 0.3	10 03 37539	120
Tin	0.01 – 1.0	10 03 37476	140



Test-Kits, type Aquanal-Professional and Vario

Already dosed tabs or powder package-test kits for the WinLab Data Line Photometer

For most simple usage!

Parameter	Measuring range mg/l	Type	Order No.	PU pc/Pack
Alkalinity-m ¹	5 – 200	T	10 03 70054	100
Alkalinity-p ¹	5 – 200	T	10 03 70056	100
Aluminium	0.01 – 0.3	Set	10 03 70436	100
Ammonium	0.02 – 2.0	T	10 03 75759	100
Ammonium	0.1 – 5.0	Set	10 03 70226	100
Boron	0.1 – 2.0	T	10 03 70471	100
Bromine	0.1 – 5.0	T	10 03 76364	100
Bromine (DPD)	0.1 – 5.0	T	10 03 70061	100
Chloride	1 – 100	Set	10 03 70071	100
Chlorine (DPD)	0.01 – 5.0	T	10 03 36467	100
Chlorine (DPD)	0.05 – 5.0	T	10 03 76164	100
Chlorine total	0.01 – 2.0	P	10 03 70200	100
Chlorine total	0.01 – 5.0	P	10 03 70202	100
Chlorine total	5 – 200	T	10 03 76870	100
Copper	0.1 – 5.0	T	10 03 78586	100
Copper	0.05 – 5.0	P	10 03 70203	100
DEHA ²	0.02 – 1.0	Set	10 03 77573	100
Hardness total dH (deutsche Härte)	1 – 30	T	10 03 70084	100
Iron	0.1 – 2.0	T	10 03 77677	100
Iron	0.1 – 3.0	P	10 03 70204	100
Iron	0.1 – 5.0	P	10 03 70205	100
Manganese	0.01 – 5.0	T	10 03 78788	100
Manganese	0.1 – 20	P	10 03 70206	100
Manganese	0.01 – 0.7	Set	10 03 70441	100
Molybdate	1 – 50	T	10 03 78991	100
Molybdate	1 – 35	Set	10 03 70209	100
Molybdate	1 – 70	Set	10 03 70426	100
Nickel	0.02 – 5.0	Set	10 03 70106	100
Nitrite	0.01 – 1	P	10 03 70219	100
Nitrite	0.01 – 1	P	10 03 70218	100
Peroxide	0.1 – 2.0	T	10 03 70102	100
Ortho-Phosphate	0.01 – 50	T	10 03 45095	100
Ortho-Phosphate	0.2 – 5.0	P	10 03 70229	100
Silicon	0.01 – 2.0	T	10 03 97453	100
Silicon	1 – 100	Set	10 03 70232	100
Silicon	0.01 – 1.6	Set	10 03 70417	100
Silicon	1 – 100	Set	10 03 70239	100
Sulphate	1 – 100	P	10 03 70421	100
Sulphate	1 – 100	P	10 03 70244	100
Suphide	0.008 – 1.0	T	10 03 98101	100

1) Determination of the alkalinity as hydroxide, carbonate and hydrogen carbonate

2) Diethylhydroxylamine (content of oxygen binding agent)

Explanation type:

T = tabs test kit

P = powder packages

Set = combination of tabs and powder packages tests

