

# Water analysis, QC and more:

pHotoFlex®

THE REAL "MULTI" - COLORIMETER

- Standardized and easy-to-use
- Sturdy and waterproof
- Sophisticated and versatile



a xylem brand

SERIES **pHoto Flex**

Environmental Protection:

# STD

Monitoring Comprehensive Water Analysis



Fish Farming and Surface Water:

# pH

Free Ammonia and CO<sub>2</sub>



Water, Beverage- and Quality Control:

# TURB

The real "Multi" with pH and Turbidity

## Accessories ...

... for Lab and on the Go



**LabStation**  
for even more comfort



**LSdata**-Software for

- GLP-compliant data management
- Programming of user-defined programs



**AQA:**  
pHotoFlex® Check



**Field Sets:**  
the mobile lab



**From Ammonia to Zinc:**

- More than 150 programs for routine analysis
- Test kits for every demand: from high precisely to easy, fast and economic
- Storage with Identification Number (ID)
- Datafilter for easy selection of data sets

**pHotoFlex® STD, plus:**

- Electrochemical pH-measurement from pH 0-16.00 ( $\pm 0.01$ ) for Standard DIN pH-electrodes
- Automatic Temperature Compensation (ATC)
- Redox Measurement
- 1-3 point calibration with calibration interval setting and calibration protocol

**pHotoFlex® pH, plus:**

- IR light source acc. to DIN 27027/ISO 7027
- Turbidity measurement range from 0.01-1100 NTU/FNU providing drinking water accuracy
- Longterm stable AMCO Clear Standards with  $\pm 1\%$  manufacturing accuracy
- The most versatile colorimeter for field and lab

# pHoto Flex



### Sophisticated Cell Compartment:

- ✓ Cannot be lost
- ✓ Variable heights for 16 mm vials
- ✓ 28 mm cells for huge measurement ranges and precise turbidity measurement

### Working Smart:

- ✓ Robust and waterproof (IP 67)
- ✓ Working faster at your fingertips
- ✓ Simple selection via favorite list
- ✓ Store with Identification number (ID)
- ✓ Easy data selection and transfer
- ✓ GLP-compliant data management with LSdata



### At a glance:

- ✓ Backlit display
- ✓ Intuitive user guidance
- ✓ Test kit measurement range, result, blank value...



SERIES <b>pHoto Flex</b>	STD	pH	TURB
Order-Nr. pHotoFlex® Instrument (SET)	251 105 (251 205)	251 100 (251 200)	251 110 (251 210)
Photometric Measurement	Transmission (%T), Absorption, Concentration		
pH-Measurement (±0.01 pH)/ Redox	-	●	●
Turbidity Measurement IR acc. DIN /ISO	-	-	●
Calibration Intervall /-protocol	-	●	●
Programs	more than 150		
Special programs with pH and Temperature	-	NH <sub>3</sub> , CO <sub>2</sub>	
User-defined programs via LSdata Software	50	100	
Data Sets (with Identification number ID)	100	1000	
Field Sets with Accessories	optional		
Optics	power saving LED + optical Filters: 436, 517, 557, 594, 610, 690 nm 0.005 Abs reproduceability, < 2 nm wavelength accuracy		
Cell sizes	16 mm round ( H:91-104 mm); 28 mm		
Batteries	4 AA for approx. 3000 measurements		
Interface, Update via Internet	RS232 + cable AK 540 B (Accessories)		
LSdata PC Software	included in Sets or indivudal package optional		
Lab use: optional Accessories	LabStation with barcode option via Scanner, incl. recharg. batteries and PC software LSdata, cable		
Recharg. batteries + universal power supply	-	optional	optional
Certificates	CE/ETLus/cETL		

For more detailed information please order free of charge our catalog **"Lab and Field Instrumentation"** or visit our web site : [www.wtw.de/en/photoflex](http://www.wtw.de/en/photoflex) (For convenience use our QR code).





## A Strong Team: pHotoFlex® Colorimeters & Reagents from A to Z

- Cell test with lot certificates
- Reagent test with lot certificates
- TC Cell test w/o lot certificates
- TP Powder Pillow test w/o lot certificates
- TR Reagent test w/o lot certificates

### Measuring easy and (almost) unlimited:

Second to none are the cell tests in 16 mm round vials – offering highest precision with easy handling by ready-to-use reagent mix. Reagent test kits with lot certificate combine highest precision with superior cost effectiveness. The powder pillow test kits provide sachets with small pack size and thus are ideal for field monitoring, offering a very good accuracy.

For those measuring in the lab, barcode support is given by using the Lab-Station with an external barcode reader.

Parameter	Test-Type	Model	Measuring Range	Order-No.
Acid Capacity up to pH 4.3	●/■	01758	K <sub>S4,3</sub> 0.40-8.00 mmol/l 20-400 mg/l CaCO <sub>3</sub>	252 087
Aluminium Al	■	14825	0.05-0.40 mg/l Al	250 425
	TP	Al-1 TP	0.002-0.250 mg/l Al	251 400
Ammonia NH <sub>3</sub> *)	●	14544	0.09 - 3.00 mg/l NH <sub>3</sub>	250 329
	●	14752/1	0.005 - 0.270 mg/l NH <sub>3</sub>	250 426
	●	14752/2		252 081
	TP	NH <sub>3</sub> -1 TP	0.002 - 0.092 mg/l NH <sub>3</sub>	251 408
	TC	NH <sub>3</sub> -2 TC	0.005 - 0.447 mg/l NH <sub>3</sub>	251 997
	TC	NH <sub>3</sub> -3 TC	0.07 - 9.37 mg/l NH <sub>3</sub>	251 998
*) with pHotoFlex® pH/Turb: subject to pH value and temperature; range given for pH 8,5/25 °C				
Ammonium NH <sub>4</sub>	●	A6/25	0.20 - 8.00 mg/l NH <sub>4</sub> -N 0.26 - 10.30 mg/l NH <sub>4</sub> <sup>+</sup>	252 072
	●	14544	0.5 - 16.0 mg/l NH <sub>4</sub> -N 0.6-20.6 mg/l NH <sub>4</sub> <sup>+</sup>	250 329
	■	14752/1	0.02 - 1.50 mg/l NH <sub>4</sub> -N	250 426
	■	14752/2	0.03 - 1.93 mg/l NH <sub>4</sub> <sup>+</sup>	252 081
	TP	NH <sub>4</sub> -1 TP	0.01 - 0.50 mg/l NH <sub>4</sub> -N 0.013-0.64 mg/l NH <sub>4</sub> <sup>+</sup>	251 408
	TC	NH <sub>4</sub> -2 TC	0.02 - 2.50 mg/l NH <sub>4</sub> -N 0.03-3.20 mg/l NH <sub>4</sub> <sup>+</sup>	251 997
	TC	NH <sub>4</sub> -3 TC	0.4 - 50.0 mg/l NH <sub>4</sub> -N 0.5-64.4 mg/l NH <sub>4</sub> <sup>+</sup>	251 998
Arsenic	■	01747	0.002 - 0.100 mg/l As	252 063
Cadmium Cd	●	14834	0.025 - 1.000 mg/l Cd	250 314
	■	01745	0.010 - 0.500 mg/l Cd	252 051
Calcium Ca	■	14815	5 - 160 mg/l Ca	250 428
Carbon dioxide CO <sub>2</sub> *)	●/■	01758	14 - 275 mg/l CO <sub>2</sub>	252 087
	*) with pHotoFlex® pH/Turb: subject to pH value and temperature; range given for pH 6,5/18,6 °C			
Chlorine Cl <sub>2</sub>	●	00595	0.05 - 4.50 mg/l Cl <sub>2</sub>	250 419
	●	00597	0.05 - 4.50 mg/l Cl <sub>2</sub>	250 420

Parameter	Test-Type	Model	Measuring Range	Order-No.
Chlorine Cl <sub>2</sub>	TP	Cl-1 TP	0.02 - 2.00 mg/l Cl <sub>2</sub> free	251 401
	TP	Cl-2 TP	0.5 - 5.00 mg/l Cl <sub>2</sub> free	251 402
	TP	Cl-3 TP	0.02 - 2.00 mg/l Cl <sub>2</sub> total	251 414
	TP	Cl-4 TP	0.5 - 5.00 mg/l Cl <sub>2</sub> total	251 415
Chlorine Liquid test kit Cl <sub>2</sub> free+total	●/■	00086 f+g	0.025-4.50 mg/l Cl <sub>2</sub>	252 077
		00087 f+g		252 078
		00088 g		252 079
		00089 f+g		252 080
Chloride Cl	●	14730	5 - 125 mg/l Cl	250 353
	■	14897/1	2.5 - 190 mg/l Cl	250 491
	■	14897/2		252 082
Chlorine dioxide ClO <sub>2</sub>	■	00608	0.02-7.50 mg/l ClO <sub>2</sub>	252 017
Chromate Cr	●	14552	0.05 - 2.00 mg/l Cr	250 341
COD	●	C3/25	10-150 mg/l COD	252 070
Chemical oxygen demand O <sub>2</sub>	●	14895	15-300 mg/l COD	250 359
	●	14690	50-500 mg/l COD	250 304
Cyanuric acid	●	C4/25	25-1500 mg/l COD	252 071
	●	14691	300-3500 mg/l COD	250 351
	●	14555	500-9500 mg/l COD	250 309
	●	01797	5000-90000 mg/l COD	252 093
	TC	COD1 TC	3-150 mg/l COD	251 990
	TC	COD2 TC	20-1500 mg/l COD	251 991
	TC	COD3 TC	200-15000 mg/l COD	251 992
COD Chemical oxygen demand	●	09772	10-150 mg/l COD	250 301
	●	09773	100-1500 mg/l COD	250 306
Copper Cu	●	14553	0.05 - 7.50 mg/l Cu	250 408
	■	14767	0.04 - 6.00 mg/l Mn	250 441
	TP	Cu-1 TP	0.04 - 5.00 mg/l Mn	251 403
Cyanide CN	●	14561	0.01 - 0.30 mg/l CN	250 344
Cyanuric acid	■	19253	2-160 mg/l Cyanuric acid	252 091

Parameter	Test-Type	Model	Measuring Range	Order-No.	
DEHA/Oxygen scavenger	TP	DEHA-1 TP	0.004-0.450 mg/l DEHA	251 421	
Fluoride F	■	00809	0.01 - 1.80 mg/l F-	252 094	
Formaldehyde HCHO	●	14500	0.10-7.00 mg/l HCHO	250406	
Gold Au	■	14821	0.5-9.0 mg/l Au	250 436	
Hydrazine N <sub>2</sub> H <sub>4</sub>	TR	N <sub>2</sub> H <sub>4</sub> 1 TR	0.004-0.600 mg/l N <sub>2</sub> H <sub>4</sub>	251 416	
Iron Fe	●	14549	0.05 - 3.00 mg/l Fe	250 349	
	●	14896	1.0 - 50.0 mg/l Fe	250 361	
	■	14761/1	0.05 - 3.00 mg/l Fe	250 435	
	■	14761/2		250 439	
	TP	Fe-1 TP	0.012 - 1.800 mg/l Fe	251 404	
	TP	Fe-2 TP	0.02 - 3.00 mg/l Fe	251 405	
Lead Pb	■	09717	0.01 - 5.00 mg/l Pb	252 034	
Magnesium Mg	●	00815	5.0 - 75.0 mg/l Mg	252 043	
Manganese Mn	■	14770/1	0.02 - 9.00 mg/l Mn	250 442	
	■	14770/2		252 084	
	●	00816	0.10 - 5.00 mg/l Mn	252 035	
	TP	Mn-1 TP	0.2 - 20.0 mg/l Mn	251 406	
	TP	Mn-2 TP	0.007 - 0.700 mg/l Mn	251 417	
Molybdenum Mo	●	00860	0.02-1.00 mg/l Mo	252 040	
	■	19252	0.5-45.0 mg/l Mo	252 090	
	TP	Mo-1 TP	0.3-35.0 mg/l Mo	251 407	
	TP	Mo-2 TP	0.3-40.0 mg/l Mo	251 418	
Nickel Ni	●	14554	0.10-6.00 mg/l Ni	250 409	
	■	14785	0.10-3.80 mg/l Ni	250 443	
	●	14556	0.10 - 2.70 mg/l NO <sub>3</sub> -N 0.44 - 11.95 mg/l NO <sub>3</sub>	250 411	
Nitrat NO <sub>3</sub>	●	14542	0.5 - 14.5 mg/l NO <sub>3</sub> -N 2.2-64.2 mg/l NO <sub>3</sub>	250 410	
	■	14942	0.2 - 13.0 mg/l NO <sub>3</sub> -N 0.9-57.5 mg/l NO <sub>3</sub>	250 422	
	TC	NO <sub>3</sub> -1 TC	0.2 - 30.0 mg/l NO <sub>3</sub> -N 1 - 133.0 mg/l NO <sub>3</sub>	251 993	
	Nitrit NO <sub>2</sub>	●	N5/25	0.00 - 0.50 mg/l NO <sub>2</sub> -N 0.07 - 1.81 mg/l NO <sub>2</sub>	252 074
		■	14776/1	0.01 - 0.50 mg/l NO <sub>2</sub> -N	250 445
	■	14776/2	0.03-1.64 mg/l NO <sub>2</sub>	250 440	
	TP	NO2-1 TP	0.002 - 0.300 mg/l NO <sub>2</sub> -N	251 409	
	TP	NO2-3 TP	0.007-0.985 mg/l NO <sub>2</sub>	251 420	
	TC	NO2-2 TC	0.03-3.00 mg/l NO <sub>2</sub> -N 0.10-9.85 mg/l NO <sub>2</sub>	251 994	
Ozone O <sub>3</sub>	■	00607/1	0.01 - 3.50 mg/l O <sub>3</sub>	252 016	
	■	00607/2		252 054	
Phenol C <sub>6</sub> H <sub>5</sub> OH	●	14551	0.10-2.50 mg/l C <sub>6</sub> H <sub>5</sub> OH	250 412	
Phosphat PO <sub>4</sub>	●	P6/25	0.05 - 3.00 mg/l PO <sub>4</sub> -P 0.05-3.0 mg/l P <sub>total</sub> *) 0.2-9.2 mg/l PO <sub>4</sub>	252 075	
	●	P7/25	0.5 - 15.0 mg/l PO <sub>4</sub> -P 0.5-15.0 mg/l P <sub>total</sub> *) 1.5-46.0 mg/l PO <sub>4</sub>	252 076	
	●	14546	0.5 - 25.0 mg/l PO <sub>4</sub> -P 1.5-76.7 mg/l PO <sub>4</sub>	250 413	
	●	00616	1.0-70.0 mg/l PO <sub>4</sub> -P 10-214 mg/l PO <sub>4</sub>	252 021	
	■	14848/1	0.010 - 3.00 mg/l PO <sub>4</sub> -P	250 446	
	■	14848/2	0.02-3.00 mg/l P <sub>total</sub> 0.06-9.20 mg/l PO <sub>4</sub>	252 086	

Parameter	Test-Type	Model	Measuring Range	Order-No.
Phosphat PO <sub>4</sub>	■	00798	1.0-50.0 mg/l PO <sub>4</sub> -P 3.0-153.0 mg/l PO <sub>4</sub>	252 045
	TP	PO <sub>4</sub> -1 TP	0.007 - 0.800 mg/l PO <sub>4</sub> -P 0.02-2.45 mg/l PO <sub>4</sub>	251 410
	TC	PO <sub>4</sub> -2 TC	0.02 - 1.63 mg/l PO <sub>4</sub> -P 0.06-5.00 mg/l PO <sub>4</sub>	251 989
	TC	PO <sub>4</sub> -3 TC	0.020-1.141 mg/l PO <sub>4</sub> -P	251 988
	TC	PO <sub>4</sub> -4 TC	0.020-1.141 mg/l P <sub>total</sub> 0.06-3.50 mg/l PO <sub>4</sub>	251 987
*) not suitable for sea water				
Potassium K	●	14562	5.0 - 50.0 mg/l K	250 407
	●	00615	30 - 300 mg/l K	252 020
Silicate/ Silicic acid Si	■	14794	0.05 - 5.00 mg/l Si 0.01-10.70 mg/l SiO <sub>2</sub>	250 438
	■	00857	0.5-50.0 mg/l Si 1.1-107.0 mg/l SiO <sub>2</sub>	252046
	TP	Si-1 TP	0.005 - 0.748 mg/l Si 0.01 - 1.60 mg/l SiO <sub>2</sub>	251 411
	TP	Si-2 TP	0.3-46.7 mg/l Si 0.7-100 mg/l SiO <sub>2</sub>	251412
	TP	Si-3 TP	0.5-35.1 mg/l Si 1.0-75 mg/l SiO <sub>2</sub>	251422
Silver Ag	■	14831	0.25-2.75 mg/l Ag	250448
Sodium Na	●	00885	10 - 300 mg/l Na	252 044
Sulfate SO <sub>4</sub>	●	14548	25 - 250 mg/l SO <sub>4</sub>	250 414
	TP	SO4-1 TP	0 - 70 mg/l SO <sub>4</sub>	251 413
	TP	SO4-2 TP	2 - 70 mg/l SO <sub>4</sub>	251 423
a-Ten (anionic)	●	14697	0.05-2.00 mg/l a-Ten	250 333
n-Ten (nonionic)	●	01787	0.10-7.50 mg/l Triton X-100	252 061
Total Nitrogen N <sub>total</sub>	●	14537	0.5 - 15.0 mg/l N <sub>ges</sub>	250 358
	TC	N <sub>tot</sub> -1 TC	0.5 - 25.0 mg/l N <sub>ges</sub>	251 995
	TC	N <sub>tot</sub> -2 TC	10 - 150 mg/l N <sub>ges</sub>	251 996
Water hardness, total hardness	●	00961	0.7 - 30.1 °d, 5 - 215 mg/l Ca	252 039
Zinc Zn	●	00861	0.025 - 1.000 mg/l Zn	252 049
	●	14566	0.20 - 5.00 mg/l Zn	250 417
Coloration (reagent free)		436 nm	0.1 - 50 m <sup>-1</sup>	
		517 nm	0.1 - 50 m <sup>-1</sup>	
		610 nm	0.1 - 50 m <sup>-1</sup>	

**pHotoFlex® Check**      **Testing equipment for AQA**      **251 306**

- Cell test with lot certificates
- Reagent test with lot certificates
- TC Cell test w/o lot certificates
- TP Powder Pillow test w/o lot certificates
- TR Reagent test w/o lot certificates

For more detailed information please order free of charge our catalog "Lab and Field Instrumentation" or visit our web site : [www.wtw.de/en/reagents](http://www.wtw.de/en/reagents) (For convenience use our QR code).



WTW Wissenschaftlich-Technische Werkstätten GmbH · Dr.-Karl-Slevogt-Straße 1 · D-82362 Weilheim, Germany  
Phone: +49 881 183-0 · Fax: +49 881 183-420 · E-Mail: [Info.WTW@Xylem.com](mailto:Info.WTW@Xylem.com) · [www.wtw.com](http://www.wtw.com)

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