

# 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 (± 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 ±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<br>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<br>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<br>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<br>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<br>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<br>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<br>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<br>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<br>2.2-64.2 mg/l NO <sub>3</sub>  | 250 410   |
|   | ■         | 14942                              | 0.2 - 13.0 mg/l NO <sub>3</sub> -N<br>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<br>1-133.0 mg/l NO <sub>3</sub>   | 251 993   |
|   | ●         | N5/25                              | 0.00 - 0.50 mg/l NO <sub>2</sub> -N<br>0.07-1.81 mg/l NO <sub>2</sub>                                      | 252 074   |
| Nitrit NO <sub>2</sub>                  | ■         | 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<br>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<br>0.05-3.0 mg/l P <sub>total</sub> *)<br>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<br>0.5-15.0 mg/l P <sub>total</sub> *)<br>1.5-46.0 mg/l PO <sub>4</sub> | 252 076   |
|   | ●         | 14546                              | 0.5 - 25.0 mg/l PO <sub>4</sub> -P<br>1.5-76.7 mg/l PO <sub>4</sub>  | 250 413   |
|   | ●         | 00616                              | 1.0-70.0 mg/l PO <sub>4</sub> -P<br>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><br>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<br>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<br>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<br>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><br>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/<br>Silicic acid Si         | ■         | 14794                  | 0.05 - 5.00 mg/l Si<br>0.01-10.70 mg/l SiO <sub>2</sub>                 | 250 438   |
|                                      | ■         | 00857                  | 0.5-50.0 mg/l Si<br>1.1-107.0 mg/l SiO <sub>2</sub>                     | 252046    |
|                                      | TP        | Si-1 TP                | 0.005 - 0.748 mg/l Si<br>0.01 - 1.60 mg/l SiO <sub>2</sub>              | 251 411   |
|                                      | TP        | Si-2 TP                | 0.3-46.7 mg/l Si<br>0.7-100 mg/l SiO <sub>2</sub>                       | 251412    |
|                                      | TP        | Si-3 TP                | 0.5-35.1 mg/l Si<br>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<br>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,<br>total hardness    | ●         | 00961                  | 0.7 - 30.1 °d,<br>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<br>(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).



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October 2015

