

Photometry

								photoLab®			
Model	Measurement range (max. specification)	Cuvette (mm)1) depending on photometer	ml	Order No.	Total	CC	SW	S6	S12	6000/7000	photoFlex®
BOD (Biochemical Oxygen Demand)											
● 00687	0.5 - 3000 mg/l BOD	16	-	252028	50	-	✓	●	●	●	-
Boron B											
● 00826	0.05 - 2.00 mg/l B	16	4	252041	25	-	✓	-	●	●	-
■ 14839	0.050 - 0.800 mg/l B	10	5	250427	60	-	-	-	●	●	-
Bromate Br₂											
■ 00605	0.020 - 10.00 mg/l Br₂	10, 20, 50	10	252014	200	-	-	-	●	●	-
Bromate: request application documents											
Cadmium Cd											
● 14834	0.025 - 1.000 mg/l Cd	16	5	250314	25	✓	-	●	●	●	●
■ 01745	0.002- 0.500 mg/l Cd	10, 20, 50, 28	10	252051	55	-	-	-	●	●	●
Calcium Ca											
■ 14815	1.0 - 160 mg/l Ca	10, 20, 16, 28	0.1	250428	100	-	✓	-	●	●	●
● 00858	10 - 250 mg/l Ca	16	1	252047	25	-	-	●	●	●	-
Carbon dioxide CO₂ (dependent on pH value and temperature)											
● / ■ 01758	14 - 275 mg/l CO₂ (pH 6.5/18.6 °C) KS₄,₃ 0.40 - 8.00 mmol/l	16	1	252087	120	-	-	-	-	●	●
Chloride Cl											
● 14730	5 - 125 mg/l Cl	16	1	250353	25	✓	✓	●	●	●	●
■ 14897/1	2.5 - 250 mg/l Cl	10, 16	1, 5	250491	100	✓	✓	-	●	●	●
■ 14897/2	2.5 - 250 mg/l Cl	10, 16	1, 5	252082	175	✓	✓	-	●	●	●
Chlorine Cl₂ (f = free, t = total) 200* = 100 Cl₂ free + 100 Cl₂ total											
● 00595	0.03 - 6.00 Cl₂, f	16	5	250419	200	-	-	●	●	●	●
● 00597	0.03 - 6.00 Cl₂, f+t	16	5	250420	200*	-	-	●	●	●	●
■ 00598/1	0.010 - 6.00 Cl₂, f	10, 20, 50	10	252010	1200	-	-	-	●	●	-
■ 00598/2	0.010 - 6.00 Cl₂, f	10, 20, 50	10	252011	200	-	-	-	●	●	-
■ 00599	0.010 - 6.00 Cl₂, f+t	10, 20, 50	10	252012	200*	-	-	-	●	●	-
■ 00602/1	0.010 - 6.00 Cl₂, t	10, 20, 50	10	252013	200	-	-	-	●	●	-
■ 00602/2	0.010 - 6.00 Cl₂, t	10, 20, 50	10	252055	1200	-	-	-	●	●	-
TP Cl₂-1 TP	0.02 - 2.00 mg/l Cl₂, f	20, 28	10	251401	100	-	-	-	-	●	●
TP Cl₂-2 TP	0.5 - 5.0 mg/l Cl₂, f	20, 28	25	251402	100	-	-	-	-	●	●
TP Cl₂-3 TP	0.02 - 2.00 mg/l Cl₂, t	20, 28	10	251414	100	-	-	-	-	●	●
TP Cl₂-4 TP	0.5 - 5.0 mg/l Cl₂, t	20, 28	10 +15 H₂0	251415	100	-	-	-	-	●	●
Chlorine dioxide ClO₂											
■ 00608	0.020 - 10.00 mg/l ClO₂	10, 20, 50, 16, 28	10	252017	200	-	-	-	●	●	●
Chlorine fluid test (free and total) Cl₂											
● / ■	0.010 - 6.00 Cl₂	16, 50	10			-	-	●	●	●	-
	00086 Reagent Cl₂-1			252077	200						
	00087 Reagent Cl₂-2			252078	400						
● = round cuvette test; ■ = reagent tests;		TC = cuvette test; TP = powder test;		CC = CombiCheck; SW = sea water;		ml = sample volume (photoLab®);		1) Ø 16, 28 □ 10, 20, 50			

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1) Ø 16, 28

□ 10, 20, 50

								photoLab®				pHotoFlex®
Model	Measurement range (max. specification)	Cuvette (mm) ¹⁾ depending on photometer	ml	Order No.	Total	CC	SW	S6	S12	6000/7000		
00088 Reagent Cl ₂ -3				252079	600							
00089 Accessories Cl ₂ (empty cuvettes etc.)				252080	25							
Chromate (chrome VI and total chrome) Cr												
●	14552	0.05 - 2.00 mg/l Cr	16	10	250341	25	-	✓	●	●	●	●
■	14758	0.01 - 3.00 mg/l Cr	10, 20, 50	5	250433	250	-	✓	-	●	●	-
Chrome bath CrO ₃ : see reagent-free tests												
COD Chemical Oxygen Demand												
●	14560	4.0 - 40.0 mg/l COD (148 °C, 2 h)	16	3	250303	25	✓	-	●	●	●	-
●	01796	5.0 - 80.0 mg/l COD (148 °C, 2 h)	16	2	252092	25	✓	-	●	●	●	-
●	C3/25	10 - 150 mg/l COD (148 °C, 2 h)	16	3	252070	25	✓	-	●	●	●	●
●	14895	15 - 300 mg/l COD (148 °C, 2 h)	16	2	250359	25	✓	-	●	●	●	●
●	14690	50 - 500 mg/l COD (148 °C, 2 h)	16	2	250304	25	✓	-	●	●	●	●
●	C4/25	25 - 1500 mg/l COD (148 °C, 2 h)	16	3	252071	25	✓	-	●	●	●	●
●	14691	300 - 3500 mg/l COD (148 °C, 2 h)	16	2	250351	25	✓	-	●	●	●	●
●	14555	500 - 10000 mg/l COD (148 °C, 2 h)	16	1	250309	25	✓	-	●	●	●	●
●	01797	5000 - 90000 mg/l COD (148 °C, 2 h)	16	0.1	252093	25	-	-	●	●	●	●
TC	COD1 TC (LR)	3 - 150 mg/l COD (148 °C, 2 h)	16	2	251990	25	-	-	-	-	●	●
TC	COD2 TC (MR)	20 - 1500 mg/l COD (148 °C, 2 h)	16	2	251991	25	-	-	-	-	●	●
TC	COD3 TC (HR)	200 - 15000 mg/l COD (148 °C, 2 h)	16	0.2	251992	25	-	-	-	-	●	●
COD Chemical Oxygen Demand (quicksilver-free, chloride is also recorded and/or disrupts in higher concentrations)												
●	09772	10 - 150 mg/l COD (148 °C, 2h)	16	2	250301	25	✓	-	●	●	●	●
●	09773	100 - 1500 mg/l COD (148 °C, 2h)	16	2	250306	25	✓	-	●	●	●	●
Copper bath Cu: see reagent-free tests												
Copper Cu												
●	14553	0.05 - 8.00 mg/l Cu	16	5	250408	25	-	✓	●	●	●	●
■	14767	0.02 - 6.00 mg/l Cu	10, 20, 50, 16, 28	10	250441	250	-	✓	-	●	●	●
TP	Cu-1 TP	0.04 - 5.00 mg/l Cu	20, 28	10	251403	100	-	✓	-	-	●	●
Cyanide (free and easily released cyanide) CN												
●	14561	0.010 - 0.500 mg/l CN	16	5	250344	25	-	-	●	●	●	●
■	09701	0.002 - 0.500 mg/l CN	10, 20, 50	5, 10	250492	100	-	-	-	●	●	-
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Model	Measurement range (max. specification)	Cuvette (mm)1) depending on photometer	ml	Order No.	Total	CC	SW	S6	S12	6000/7000		
Cyanuric acid												
■ 19253	2 - 160 mg/l cyanuric acid	20	5	252091	100	-	-	-	●	●	-	
DEHA/oxygen binder												
■ 19251	0.020 - 0.500 mg/l DEHA	20	10	252089	200	-	-	-	●	●	-	
TP DEHA TP	0.004 - 0.450 mg/l DEHA	20, 28	25	251421	100	-	-	-	-	●	●	
Detergents: see tensides: anionic, cationic, non-ionic												
Flouride F												
● 00809	0.10 - 1.80 mg/l F	16	50	252094	25	-	-	●	●	●	●	
■ 14598/1	0.10 - 20.0 mg/l F	10	5/0.5	252048	100	-	-	-	●	●	-	
■ 14598/2	0.10 - 20.0 mg/l F	10	5/0.5	252083	250	-	-	-	●	●	-	
Formaldehyde HCHO												
● 14500	0.10 - 8.00 mg/l HCHO	16	2	250406	25	-	-	●	●	●	●	
■ 14678	0.02 - 8.00 mg/l HCHO	10, 20, 50	3	250331	100	-	-	-	●	●	-	
Gold Au												
■ 14821	0.5 - 12.0 mg/l Au	10, 16	2	250436	80	-	✓	-	●	●	●	
Halogens (total): see chlorine Cl ₂ , bromide Br ₂ , Iodine I ₂ , Chlorine dioxide ClO ₂ , Ozone O ₃												
Hazen: see reagent-free tests: Coloring												
Heavy metals: see iron Pb, cadmium Cd, chrome Cr												
Hydrazine N ₂ H ₄												
■ 09711	0.005 - 2.00 mg/l N ₂ H ₄	10, 20, 50	5	250493	100	-	-	-	●	●	-	
TP N ₂ H ₄ -1 TP	0.004 - 0.600 mg/l N ₂ H ₄	20, 28	10	251416	100	-	-	-	-	●	●	
Hydrogen peroxide H ₂ O ₂												
● 14731	0.25 - 20.0 mg/l H ₂ O ₂	16	10	250402	25	-	✓	-	●	●	-	
■ 18789	0.015 - 6.00 mg/l H ₂ O ₂	10, 20	8	252067	100	-	-	-	●	●	-	
Iod I ₂												
■ 0606	0.050 - 10.00 mg/l I ₂	10, 20, 50	010	252015	200	-	-	-	●	●	-	
Iodine color index: see reagent-free tests: Coloring												
Iron Fe												
● 14549	0.05 - 4.00 mg/l Fe	16	5	250349	25	✓	✓	●	●	●	●	
● 14896	1.0 - 50.0 mg/l Fe	16	1	250361	25	-	-	●	●	●	●	
■ 14761/1	0.005 - 5.00 mg/l Fe	10, 20, 50, 16, 28	5	250435	1000	✓	✓	-	●	●	●	
■ 14761/2	0.005 - 5.00 mg/l Fe	10, 20, 50, 16, 28	5	250439	250	✓	✓	-	●	●	●	
■ 00796	0.010 - 5.00 mg/l Fe	10, 20, 50	8	252042	150	✓	✓	-	●	●	-	
Fe-1 TP	0.012 - 1.800 mg/l Fe	16, 28	10	251404	100	-	-	-	-	●	●	
TP Fe-2 TP	0.02 - 3.00 mg/l Fe	16, 28	10	251405	100	-	-	-	-	●	●	
Lead Pb												
● 14833	0.10 - 5.00 mg/l Pb	16	5	250313	25	✓	-	●	●	●	-	
■ 09717	0.010 - 5.00 mg/l Pb	10, 20, 50, 16, 28	8	252034	50	✓	-	-	●	●	●	
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Magnesium Mg											
● 00815	5.0 - 75.0 mg/l Mg	16	1	252043	25	-	✓	●	●	●	●
Manganese Mn											
■ 01739	0.005 - 2.00 mg/l Mn	10, 20, 50	8	252056	250	-	-	-	●	●	
■ 14770/1	0.01 - 10.0 mg/l Mn	10, 20, 50, 16, 28	5	250442	500	✓	✓	-	●	●	●
■ 14770/2	0.01 - 10.0 mg/l Mn	10, 20, 50, 16, 28	5	252084	250	✓	✓	-	●	●	●
● 00816	0.10 - 5.00 mg/l Mn	16	7	252035	25	✓	-	●	●	●	●
TP Mn-1 TP	0.2 - 20.0 mg/l Mn	20, 28	10	251406	100	-	-	-	-	●	●
TP Mn-2 TP	0.007 - 0.700 mg/l Mn	20, 28	10	251417	100	-	-	-	-	●	●
Molybdenum Mo											
● 00860	0.02 - 1.00 mg/l Mo	16	10	252040	25	-	-	-	●	●	●
TP Mo-1 TP	0.3 - 35.0 mg/l Mo	20, 28	10	251407	100	-	-	-	-	●	●
TP Mo-2 TP	0.3 - 40.0 mg/l Mo	20, 28	25	251418	100	-	-	-	-	●	●
Monochloramine											
■ 01632	0.05 - 10.0 mg/l Cl ₂ , t	10, 20, 50	10	252057	150	-	-	-	●	●	-
Natrium Na											
● 00885	10 - 300 mg/l Na	16	0.5	252044	25	-	-	●	●	●	●
Nickel bath: see reagent-free tests											
Nickel Ni											
● 14554	0.10 - 6.00 mg/l Ni	16	5	250409	25	✓	-	●	●	●	●
■ 14785	0.02 - 5.00 mg/l Ni	10, 20, 50, 28	5	250443	250	✓	-	-	●	●	●
Nitrate NO ₃											
● 14556	0.10 - 3.00 mg/l NO ₃ -N 0.4 - 13.3 mg/l NO ₃	16	2	250411	25	✓	✓	-	●	●	●
● N2/25	0.5 - 25.0 mg/l NO ₃ -N 2.2 - 110.7 mg/l NO ₃	16	1	252073	25	✓	-	●	●	●	-
● 14542	0.5 - 18.0 mg/l NO ₃ -N 2.2 - 79.7 mg/l NO ₃	16	1.5	250410	25	✓	-	●	●	●	●
● 14764	1.0 - 50.0 mg/l NO ₃ -N 4 - 221 mg/l NO ₃	16	0.5	250347	25	✓	-	●	●	●	-
● 00614	23 - 225 mg/l NO ₃ -N 102 - 996 mg/l NO ₃	16	0.1	252019	25	-	-	●	●	●	-
■ 14942	0.2 - 17.0 mg/l NO ₃ -N 0.9 - 75.3 mg/l NO ₃	10, 16	1	250422	50	✓	✓	-	●	●	●
■ 14773	0.2 - 20.0 mg/l NO ₃ -N 0.9 - 88.5 mg/l NO ₃	10, 20	1.5, 3	250444	100	✓	-	-	●	●	-
■ 09713/1	0.10 - 25.0 mg/l NO ₃ -N 0.40 - 110.7 mg/l NO ₃	10, 20, 50	0.5	250421	90	✓	-	-	●	●	-
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Photometry

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Test equipment

CombiCheck

CombiCheck solutions are ready-to-use multi-parameter standards. Every package contains a standard solution and an addition solution. Both solutions can be directly used, **without dilution**, for quality assurance.

- The standard solution ensures the accuracy of the results from the entire system: Work methods – analysis procedures – reagents – photometers.
- The addition solution allows you to check sample-dependent influences (MatrixCheck) through the measurement of the recovery rate and establishes the sample preparation necessary.

The maximum number of determinations with a **CombiCheck** standard solution depends on the test kit used. 280 determinations are always possible with the addition solution. Please take note of the instructions in the descriptions for the test kits!

Parameter	Concentration	Compatible test kit model	maximum number of determinations
Model 14676 CombiCheck 10			Order No. 250482
Ammonium	4.00 mg/l NH ₄ -N	A6/25 14558	90 90
Chloride	25.0 mg/l Cl	14730	90
COD	80 mg/l COD	C3/25 14540	30 30
Nitrate	2.5 mg/l NO ₃ -N	14556 14773	45 60
Phosphate	0.80 mg/l PO ₄ -P	P6/25 14543 14848	18 18 9
Sulphate	100 mg/l SO ₄	14548 14791 00617	18 40 48
Model 14675 CombiCheck 20			Order No. 250483
Ammonium	12.0 mg/l NH ₄ -N	14544	180
Chloride	60 mg/l Cl	14730	90
COD	750 mg/l COD	C4/25 14541	30 30
Nitrate	9.0 mg/l NO ₃ -N	N2/25 14542	90 60
		14563	90
		14773	60
		14942	60
		09713	180
Phosphate	8.0 mg/l PO ₄ -P	P7/25 14729	90 90
Sulphate	500 mg/l SO ₄	14564	90
Model 14695 CombiCheck 50			Order No. 250486
Ammonium	1.00 mg/l NH ₄ -N	14739 14752	19 19
Nitrogen	5.0 mg/l N _{ges}	14537 00613	9 9
COD	20.0 mg/l COD	14560	32

Parameter	Concentration	Compatible test kit model	maximum number of determinations
Model 14696 CombiCheck 60			Order no. 250487
COD	250 mg/l COD	14690 14895	48 48
Chloride	125 mg/l Cl	14897	96
Model 14689 CombiCheck 70			Order No. 250488
Ammonium	50.0 mg/l NH ₄ -N	14559 00683	950 480
COD	5,000 mg/l COD	14555	95
Nitrogen	50.0 mg/l N _{ges}	14763	95
Model 14738 CombiCheck 80			Order no. 250489
COD	1,500 mg/l COD	14691	48
Nitrate	25.0 mg/l NO ₃ -N	14764	190
Phosphate	15.0 mg/l PO ₄ -P	14729 P7/25	95 95
Model 18700 CombiCheck 90			Order No. 252501
Cadmium	0.250 mg/l Cd	01745 14834	9 19
Copper	2.00 mg/l Cu	14553 14767	19 19
Iron	1.00 mg/l Fe	14549	19
		14761 00796	19 12
Manganese	1.00 mg/l Mn	14770 00816	9 13
Model 18701 CombiCheck 100			Order No. 252502
Aluminum	0.40 mg/l Al	00594 14825	16 19
Nickel	2.00 mg/l Ni	14554 14785	19 19
Lead	2.00 mg/l Pb	14833 09717	19 11
Zinc	0.75 mg/l Zn	00861 14832	9 19

Standard solutions

Parameter	Conc. [mg/l]	Amount [ml]	Model	Order no.
Aluminum	1000	500	SL Al 19770	250460
Ammonium	1000	500	SL NH ₄ 19812	250461
AOX	20	85 (8-16 tests)	AOX 00680	252026
BOD	210	10 Fl. for 10 x 1l	BOD 00718	252030
Boron	1000	500	SL B 19500	250463
Cadmium	1000	500	SL Cd 19777	250464
Calcium	1000	500	SL Ca 19778	250465
Chloride	1000	500	SL Cl 19897	250466
Chromate	1000	500	SL CrO ₃ 19780	250468
Chrome	1000	500	SL Cr 19779	250467
COD 100	100	100	SL COD 100	252450
COD 1500	400	30	SL COD 400	252451
Copper	1000	500	SL Cu 19786	250473
Flouride	1000	500	SL F 19814	250470
Iron	1000	500	SL Fe 19781	250469
Lead	1000	500	SL Pb 19776	250462
Manganese	1000	500	SL Mn 19789	250474
Nickel	1000	500	SL Ni 19792	250475
Nitrate	1000	500	SL NO ₃ 19811	250476
Nitrite	1000	500	SL NO ₂ 19899	250477
Phosphate	1000	500	SL PO ₄ 19898	250478
Potassium	1000	500	SL K 70230	252471
Silica (silicon)	1000	500	SL Si 70236	252472
Silver	1000	500	SL Ag 19797	250479
Sulphate	1000	500	SL SO ₄ 19813	250480
TOC	1000	100	SL TOC 09017	250499
Zinc	1000	500	SL Zn 19806	250481

List of the standard solutions that required regular fresh preparation due to limited stability:

- free chlorine
- bound chlorine
- formaldehyde
- hydrazine
- hydrogen sulfide
- phenol
- silicon
- sulfide
- sulphate
- anionic tensides
- hydrogen peroxide

Order information: Test equipment

Model	Description	Order No.
PhotoCheck 14693*	Test equipment for photoLab®	250490
PipeCheck 14962	Test equipment for pipette volumes	250498

*) also for pHOtoFlex upon request

PhotoCheck

AQA/IQC: comprehensive test equipment for the measurement's optics and linearity!

The stable color solutions facilitate the checking of the filter and the wavelength settings 445 nm/446 nm, 520 nm/525 nm and 690 nm.

With four solutions per wavelength, the accuracy of the wavelength settings and the linearity of the absorbance measurement are checked. The check takes place quickly and easily via a simple menu-guided function.

PipeCheck

Test equipment for the right pipette volume!

The use of the pipette to be tested leads to the dilution of the relevant test solution with dist. water and compares the absorbance of the diluted solution with the absorbance of a reference solution. Pipettes with variations in volume of more than 2.5% are identified as defective.



General instructions

- **Certificates** for test kits marked ■ (coded reagent tests) and ● (coded round cuvette tests) can be found on our homepage at www.WTW.com.
- **Storage:** If not stated otherwise, the test kit can be stored at +15 °C to +25 °C .
- We recommend regularly checking reagents and photometers, for example, with **PhotoCheck** and **CombiCheck**.
- Coded round cuvette tests are marked with ●. The external diameter of the cuvette is 16 mm. The round cuvette tests are quick tests with just one measurement range.
- Coded reagent tests are marked with ■. The measurement range specification is based on the total usable measurement range without pre-dilution of the sample and generally includes one (rectangular) cuvette switch.
- All reagent tests require a reaction vessel or RK 14/25 empty cuvettes and rectangular cuvettes.
- Not all cuvette types are recognized for the use of single-use cuvettes; We recommend the use of PMMA cuvettes (250 607).
- The labels "TC" and "TP" stand for test kits suitable for pHotoFlex® without a lot certificate. TCs are round cuvette tests in 16 mm cuvettes, TPs are powder tests and are measured depending on the measurement range in round cuvettes with external diameters of 28 or 16 mm..
- Round cuvettes are not suitable for multiple use.
- For some tests the measurement ranges are provided in a second citation form, for example, nitrate as nitrate (NO₃) and as nitrate nitrogen (NO₃-N). Further dimensions and citations forms which can be adjusted can be found in the operating manual for the photometer in use.
- Tests that require a **digestion** , for example, COD, are labeled with the digestion temperature and length (e.g. 148°C, 2 h). The WTW thermoreactors offer suitable programs for this purpose. For digestion, there are crack sets for heavy metals and total nitrogen (*see price list*).
- The current **analysis regulations** are contained in the respective packaging.

The information for DIN/ISO/EN/US EPA and precise measurement ranges for the photometer models can be found in the price list.

Reagent-free tests

% transmission

0 – 100% T, 10, 20 and 50 mm cuvettes (self absorption).

Absorbance

Absorbance is proportionally connected with the concentration of a substance held in water as per the Beer Lambert Law $E = \epsilon(\lambda) \cdot c \cdot d$. The proportionality constant $\epsilon(\lambda)$ depends on wavelength. These constants and further data, which are required for the determination of the substance contained in water, are stored as method data in modern photometers. The basic measurement size, however, is and remains the absorbance.

Coloring (EN ISO 7887: 1994)

If pure water is viewed under directly transmitted light from a viewpoint of several meters away, it appears to be colored light blue. This coloring can change to a variety of colors in the presence of impurities. Natural waters are usually colored yellowish-brown by iron or clay particles, or by humic substances. (A green coloring may be caused by algae). The "real" coloring of a water sample can be determined following filtration through a 0.45 µm filter.

Usually most yellowish-brown-colored waters and runoff from communal wastewater treatment plants can be measured at 436 nm. The runoff from industrial wastewater treatment plants does not show any steep or pronounced absorbance maximum. To investigate these waters, they must

be measured at 436 nm (quicksilver line), while the other two measuring wavelengths of 525 nm and 620 nm can only deviate slightly from these wavelengths based on the filter used. The standard allows for discontinuous filter photometer measurements with spectral bandwidths from < 20 nm for measurements at 436 nm, 535 nm and 620 nm. Photometers with 445 nm- and 520 nm-interference filters with a bandwidth of 10 nm are therefore also suitable, for example. A spectrophotometer is required for comparison with the standard.

The result is provided in m^{-1} with the additional display of the measurement wavelengths and the spectral bandwidth, the water temperature, and the pH value. In some publications the result is also provided in CIT (color index transparency), which is identical to the result in m^{-1} . (DIN ISO 6271: 1988)

Clear liquids: Determination of the color index with the Platinum-Cobalt Scale (Hazen Color Index, APHA Color Index).

Spectrophotometers for the measurement of the stock solution with 430 nm, 455 nm, 480 nm and 510 nm are listed as suitable photometers. The actual measurement takes place as per the standard with a color comparison device enabling a visual comparison.

Chrome bath

Reagent-free measurement of the self-coloring of a galvanizing bath: Pipette in a 5 ml sample to a 100 ml graduated cuvette, fill up to the mark with distilled water and mix well. Pipette in 4 ml of the diluted sample to a 100 ml graduated cuvette, fill up with distilled water and mix well. Add 5 ml of the 1:500-diluted sample to a glass with a screw top, add 5 ml 40% sulfuric acid. Seal the glass and mix the contents well. Decant into a rectangular cell for measurement

Nickel bath

Reagent-free measurement of the self-coloring of a galvanizing bath: Fill a 5 ml sample with 5 ml 40% sulfuric acid in a round cuvette, seal and mix. Decant into a rectangular cell for measurement

Copper bath

Reagent-free measurement of the self-coloring of a galvanizing bath: Add a 25 ml sample to a 100 ml

graduated cuvette, fill up to the mark with distilled water and mix well. Add 5 ml of the diluted sample to a glass with a screw top, add 5 ml 40% sulfuric acid. Seal the glass and mix the contents well. Decant into a rectangular cell for measurement

SAC - spectral absorption coefficient

The spectral absorption coefficient is generally designated as SAC (unit $1/m$) and photometrically determined as the sum of the dissolved organic substances contained in the water. In the area of drinking water, the SAC is usually measured at a wavelength of 436 nm, and at 254 nm in the wastewater sector. In doing so, differentiation must be made between clear and turbid samples. To be noted as a limitation is the fact that this summary determination can only be sensibly applied if the qualitative composition of the substances contained in the water does not significantly change. SAC methods are available in the photoLab® 6000/7000 Series.

Further application methods for photoLab® 6000/7000

Application methods are photometric procedures usually based on completed test kits and which usually require multi-level steps. The selection of application methods is carried out manually via the input of the method number. A complete list of the programmed procedures can be found in the photometer's analysis regulations.

- ADMI color measurement
- Chlorophyll-a as per DIN
- Chlorophyll-a as per ASTM
- Chlorophyll-a, -b, -c as per ASTM
- Glucose
- TSS (total suspended solids)