

Spectroquant® Test Kits

For swift, secure analysis, there's no better choice than Spectroquant® test kits. Consisting of validated, standard-compliant reagents, the kits are pre-programmed for use with Spectroquant® instruments to ensure rapid, reliable results. Thanks to their excellent quality, most of our kits conform to international standards, allowing you to test with absolute confidence.

Be sensitive

Do you need to detect parameters in ultra low concentrations?
With Spectroquant® Prove 600 and 100-mm cells, you can accurately measure the lowest analyte concentrations possible photometrically.



Super-sensitive test kits

Iron Test [Ord. No. 1.14761.0001]

0.0005–5.00 mg/L Fe | 10-, 20-, 50- and 100-mm cells

Phosphate Test [Ord. No. 1.14848.0001]

0.0005–5.00 mg/L PO₄-P | 10-, 20-, 50- and 100-mm cells

Silicate (Silicic Acid) Test [Ord. No. 1.01813.0001]

0.00025 – 0.5000 mg/L SiO₂ | 50- and 100-mm cells

secure analysis

with validated,
standard-compliant reagents

bar-code identification

for fast, simple operation

rapid, reliable results

though pre-programmed blank values

Reagent test kits

- Contain highly stable, ready-to-use reagent mixtures
- AutoSelector uses bar-code system to automatically select the right analysis method in Spectroquant® NOVA and Prove photometers
- Measuring range can be easily varied by selecting the appropriate cell format
- Package insert explains reaction principle, working procedures and application areas
- Long shelf life of up to three years at room temperature



Cell test kits

- Contain virtually all reagents necessary for the analysis
- Spectroquant® NOVA and Prove photometers automatically recognize the test and select the correct analysis method
- Test kit label provides all important information regarding contents, safety and batch number
- Package insert explains reaction principle, working procedures and application areas
- Long shelf life of up to three years at room temperature



Spectroquant® Test Kits

Regulations and approved methods

Testing water according to national regulations or USEPA methods

Since contaminated water is harmful for humans and the environment, regulatory agencies, like the USEPA (U.S. Environmental Protection Agency), require the use of official methods when testing drinking water and wastewater. To support your analysis, many Spectroquant® test kits are developed according to approved USEPA or ISO standards. This ensures that you have reliable, reproducible results that are in compliance with regulations.

USEPA

USEPA-approved: Methods are identical to those from USEPA methods; a copy of the USEPA acceptance letter is available upon request.

USEPA-equivalent: The test kit is validated according to defined procedures; the chemistry is equivalent to USEPA or APHA methods.

**USEPA
approved**

Our "USEPA approved" stamp will help you easily find the right Spectroquant® test kits in the following tables.

The tables also provide references to norms and standards on approved and equivalent methods.



For further information please visit:
www.merckmillipore.com/usepa

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EUROPEAN COMPANY**

*to offer a broad range of approved photometric test kits for
drinking water, wastewater and environmental analysis.*

Do you monitor the quality of drinking water?

The following table provides a comparison of a selection of parameters for concentrations listed by the WHO, European Union and USEPA.

Parameter	WHO Guideline	EU	USEPA
	2011	Oct. 2015	May 2009
A Aluminium (Al)	not provided	0.2 mg/L	0.05–0.2 mg/L
Ammonium (NH ₄)	not provided	0.5 mg/L	
Antimony	0.02 mg/L	0.005 mg/L	0.006 mg/L
Arsenic (As)	0.01 mg/L	0.01 mg/L	0.01 mg/L
B Barium (Ba)	0.7 mg/L		2 mg/L
Boron (B)	2.4 mg/L	1 mg/L	
Bromate	0.01 mg/L	0.01 mg/L	0.01 mg/L
C Cadmium (Cd)	0.003 mg/L	0.005 mg/L	0.005 mg/L
Chloride (Cl ⁻)	not provided	250 mg/L	250 mg/L
Chlorine (Cl ₂) free	0.2 mg/L (minimal residual concentration at the point of delivery)		4 mg/L
Chlorine (total)	0.2–1 mg/L		
Chlorine dioxide (ClO ₂)	not provided		0.8 mg/L
Chromium (Cr)	0.05 mg/L	0.05 mg/L	0.1 mg/L
Coliforms (total) (organisms/100 mL)	0	0	5 %
Color	acceptable	acceptable	15 color units
Conductivity		2500 µS/cm	
Copper (Cu)	2 mg/L	2 mg/L	1 mg/L
Cyanides (Cy)	not provided	0.05 mg/L	0.2 mg/L
F Fluoride (F ⁻)	1.5 mg/L	1.5 mg/L	4 mg/L
I Iron (Fe)	not provided	0.2 mg/L	0.3 mg/L
L Lead (Pb)	0.01 mg/L	0.01 mg/L	0.015 mg/L
M Manganese (Mn)	not provided	0.05 mg/L	0.05 mg/L
Mercury (Hg)	0.006 mg/L	0.001 mg/L	0.002 mg/L
Monochloramines (as Cl ₂)	3 mg/L		
Molybdenum (Mo)	not provided		
N Nickel (Ni)	0.07 mg/L	0.02 mg/L	
Nitrates	50 mg/L (as NO ₃ ⁻)	50 mg/L (as NO ₃)	10 mg/L (as N)
Nitrites	3 mg/L (as NO ₂ ⁻)	0.5 mg/L (as NO ₂)	1 mg/L (as N)
P pH	not provided	6.5–9.5	6.5–8.5
S Selenium (Se)	0.04 mg/L	0.01 mg/L	0.05 mg/L
Silver (Ag)	not provided		0.1 mg/L
Sodium (Na)	not provided	200 mg/L	
Sulfate (SO ₄)	not provided	250 mg/L	250 mg/L
T Total Dissolved Solids (TDS)	not provided		500 mg/L
Trihalomethans (total)	Chloroform: 0.3 mg/L Bromoform: 0.1 mg/L Dibromochloromethane (DBCM): 0.1 mg/L Bromodichloromethane (BDCM): 0.06 mg/L	0.1 mg/L	0.08 mg/L

WHO Guidelines for Drinking Water Quality, 4th edition (**not provided** means that the WHO has not provided guidelines for the parameter, as it is not found at levels posing a health concern in drinking water)

EU Drinking Water Directive of the European Union (Council Directive 98/83/EC), consolidated with the latest amendments of October 2015

USEPA National Primary Drinking Water Regulations and Secondary Drinking Water Standards, May 2009

Spectroquant® Test Kits

Parameters A

Parameter	Measuring range of the Spectroquant® instruments [mg/L]				Citation form	No. of tests	Ord. No.
	Prove 100/300/600	NOVA 30/60	Multy	Move 100			
A Absorbance	-3.300 – 3.300 A	-0.300 – 3.000 A	-2.600 – 2.600 A	-2.600 – 2.600 A	-	-	
Acid Capacity Cell Test to pH 4.3 (total alkalinity) ^{A)}	0.40 – 8.00 mmol/L	0.40 – 8.00 mmol/L	0.40 – 8.00 mmol/L	0.40 – 8.00 mmol/L	CaCO ₃	120	1.01758.0001
ADMI Color measurement							
Alkalinity (total)							
Aluminium Cell Test	0.02 – 0.50	0.02 – 0.50	0.05 – 0.50	0.05 – 0.50	Al	25	1.00594.0001
Aluminium Test	0.020 – 1.20	0.020 – 1.20	20 – 700 µg/L	20 – 700 µg/L	Al	350	1.14825.0001
Ammonia, free	0.000 – 3.00 0.000 – 3.65	-	-	-	NH ₃ -N NH ₃	-	-
USEPA approved Ammonium Cell Test ^{B.3)}	0.010 – 2.000 0.01 – 2.58 0.010 – 2.000 0.01 – 2.43	0.010 – 2.000 0.01 – 2.58	10 – 2,000 µg/L 10 – 2,576 µg/L	10 – 2,000 µg/L 10 – 2,576 µg/L	NH ₄ -N NH ₄ NH ₃ -N NH ₃	25	1.14739.0001
USEPA approved Ammonium Test ^{B.3)}	0.010 – 3.00 0.013 – 3.86 0.010 – 3.00 0.016 – 3.65	0.010 – 3.00 • 0.013 – 3.86 •	0.02 – 1.30 0.03 – 1.67	0.02 – 1.30 0.03 – 1.67	NH ₄ -N NH ₄ NH ₃ -N NH ₃	250 500	1.14752.0002 1.14752.0001
USEPA approved Ammonium Cell Test ^{B.3)}	0.20 – 8.00 0.26 – 10.30 0.20 – 8.00 0.24 – 9.73	0.20 – 8.00 0.26 – 10.30	0.20 – 8.00 0.26 – 10.30	0.20 – 8.00 0.26 – 10.30	NH ₄ -N NH ₄ NH ₃ -N NH ₃	25	1.14558.0001
USEPA approved Ammonium Cell Test ^{B.3)}	0.5 – 16.0 0.6 – 20.6 0.5 – 16.0 0.6 – 19.5	0.5 – 16.0 0.6 – 20.6	-	-	NH ₄ -N NH ₄ NH ₃ -N NH ₃	25	1.14544.0001
USEPA approved Ammonium Test ^{B.3)}	2.0 – 150 2.6 – 193 2.0 – 150 2.4 – 182	2.0 – 150 • 2.6 – 193 •	1.0 – 50.0 1.3 – 64.4	1.0 – 50.0 1.3 – 64.4	NH ₄ -N NH ₄ NH ₃ -N NH ₃	100	1.00683.0001
USEPA approved Ammonium Cell Test ^{B.3)}	4.0 – 80.0 5.2 – 103.0 4.0 – 80.0 4.9 – 97.3	4.0 – 80.0 5.2 – 103.0	4.0 – 80.0 5.2 – 103.0	4.0 – 80.0 5.2 – 103.0	NH ₄ -N NH ₄ NH ₃ -N NH ₃	25	1.14559.0001
Antimony	0.10 – 8.00	0.10 – 8.00	-	-	Sb	-	-
AOX Cell Test	0.05 – 2.50	0.05 – 2.50	0.05 – 2.50	0.05 – 2.50	AOX	25	1.00675.0001
AOX Sample Preparation Set	-	-	-	-	-	25	1.00677.0001
AOX Enrichment Set	-	-	-	-	-	2	1.00678.0001

A. The cell test contains four 16 mm cells with a bar-code label. After measurement, the cells can be emptied and cleaned for subsequent measurements. | B. This method is officially recognized by the USEPA as an alternative method for the investigation of 1. wastewater, 2. drinking water 3. drinking water and wastewater. | • Only with NOVA 60



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Method	Reference to norms and standards / Comments	Pipette volume [mL]	Cell size [mm] NOVA/Prove	Accuracy [mg/L]	Areas of application
own coloring	physical measurement	-	10, 20, 50	-	
Indicator	-	4.0 + 1.0 + 0.5	-	±0.29 mmol/L	2, 5, 9, 10, 11, 13, 15, 18
	see Color, ADMI				
	see Acid Capacity Cell Tests to pH 4.3				
Chromazurol S	analogous APHA 3500-Al B, DIN ISO 10566	0.25 + 6.0	-	±0.02	1, 6, 8, 9, 11, 13, 15, 16, 17, 18
Chromazurol S	analogous APHA 3500-Al B, DIN ISO 10566	0.25 + 1.2 + 5.0	10, 20, 50	±0.009	1, 6, 9, 11, 13, 15, 16, 17, 18
-	Application, measurement of free ammonia under consideration of the pH and temperature of the sample after spectrophotometric determination of the ammonium content, additionally required 1.14752	0.6 + 5.0	10, 20, 50	-	2, 9, 13, 18
Indophenol blue	analogous EPA 350.1, APHA 4500-NH ₃ F, ISO 7150-1, DIN 38406-5	5.0	-	±0.050	1, 2, 5, 9, 11, 12, 13, 15, 17, 18
Indophenol blue	analogous EPA 350.1, APHA 4500-NH ₃ F, ISO 7150-1, DIN 38406-5	0.6 + 5.0	10, 20, 50	±0.016	1, 2, 5, 9, 11, 12, 13, 15, 16, 17, 18
Indophenol blue	analogous EPA 350.1, APHA 4500-NH ₃ F, ISO 7150-1, DIN 38406-5	1.0	-	±0.19	1, 2, 5, 6, 8, 9, 11, 12, 13, 15, 16, 18
Indophenol blue	analogous EPA 350.1, APHA 4500-NH ₃ F, ISO 7150-1, DIN 38406-5	0.5	-	±0.4	1, 6, 8, 11, 13, 16, 18
Indophenol blue	analogous EPA 350.1, APHA 4500-NH ₃ F, ISO 7150-1, DIN 38406-5	0.1 + 0.2 + 5.0	10	±1.7	1, 4, 8, 9, 12, 13, 16, 18
Indophenol blue	analogous EPA 350.1, APHA 4500-NH ₃ F, ISO 7150-1, DIN 38406-5	0.1	-	±1.9	1, 4, 8, 12, 13, 16, 18
Brillant green	Application, see more information in Prove and NOVA manual	4.0 + 1.0 + 5.0	10	-	11, 18
Iron(III)-thiocyanate	adsorption analogous EN ISO 9562	0.2 + 1.0 + 7.0	-	±0.20	5, 8, 9, 10, 11, 13, 15, 18
-	additionally required for AOX measurement	-	-	-	
-	for multiple use, additionally required for AOX measurement	-	-	-	

Areas of application:

3 Beverages	7 Disinfection control	11 Environment	15 Mineral water
4 Biotechnology, fermenter	8 Disposal drainage water	12 Food testing	16 Seawater
1 Agriculture	9 Drinking water	13 Groundwater, surface water	17 Swimming pools
2 Aquaculture	10 Electroplating surface refinement	14 Milk dairy products	18 Wastewater
5 Boiler water, cooling water			
6 Construction-material industry			

Spectroquant® Test Kits

Parameters A-C

Parameter	Measuring range of the Spectroquant® instruments [mg/L]				Citation form	No. of tests	Ord. No.
	Prove 100/300/600	NOVA 30/60	Multy	Move 100			
A AOX Standard 0.2 – 2.0 mg/L	–	–	–	–	–	8 – 16	1.00680.0001
Arsenic Test	0.001 – 0.100	0.001 – 0.100 •	5 – 100 µg/L	5 – 100 µg/L	As	30	1.01747.0001
Arsenic reagent 2: Sulfuric acid 95 – 97 % for analysis EMSURE® ISO	–	–	–	–	–	50	1.00731.1000
Arsenic reagent 7: Zinc granular for analysis, particle size about 3 – 8 mm EMSURE® ISO	–	–	–	–	–	27	1.08780.0500
Absorption Tube for Arsenic with ground joint NS29	–	–	–	–	–	1	1.73501.0001
B BOD Cell Test ^{A)}	0.5 – 3,000	0.5 – 3,000	0.5 – 3,000	0.5 – 3,000	BOD	50	1.00687.0001
BOD Nutrient Salt Mixture (with allyl thiourea)	–	–	–	–	–	12 L	1.00688.0001
BOD (Oxygen) Reaction bottle	–	–	–	–	–	1	1.14663.0001
BOD Standard 210 ±20 mg/L	–	–	–	–	–	10 L	1.00718.0001
Boron Test	0.050 – 0.800	0.050 – 0.800	–	–	B	60	1.14839.0001
Boron Cell Test	0.05 – 2.00	0.05 – 2.00	0.05 – 2.00	0.05 – 2.00	B	25	1.00826.0001
Bromate	0.5 – 100 µg/L ^{D)} 1.0 – 200 µg/L ^{E)}	0.003 – 0.120	–	–	BrO ₃	–	–
Bromine Test	0.020 – 10.00	0.020 – 10.00	0.10 – 5.00	0.10 – 5.00	Br ₂	200	1.00605.0001
C Cadmium Test ^{C)}	0.0020 – 0.500	0.0020 – 0.500 •	5 – 500 µg/L	5 – 500 µg/L	Cd	55	1.01745.0001
Cadmium Cell Test ^{C)}	0.025 – 1.000	0.025 – 1.000	25 – 1.000 µg/L	25 – 1.000 µg/L	Cd	25	1.14834.0001
Calcium Test	0.20 – 4.00	0.20 – 4.00	–	–	Ca	100	1.00049.0001
Calcium Test	1.0 – 15.0	1.0 – 15.0	5 – 160	5 – 160	Ca	100	1.14815.0001
	1.4 – 21.0	1.4 – 21.0	7 – 224	7 – 224	CaO		
	2.5 – 37.5	2.5 – 37.5	13 – 400	13 – 400	CaCO ₃		
	5 – 160	5 – 160			Ca		
	7 – 224	7 – 224			CaO		
	12 – 400	12 – 400			CaCO ₃		

A. The cell test contains four 16 mm cells with a bar-code label. After measurement, the cells can be emptied and cleaned for subsequent measurements. | C. For determination of total content of this parameter, use one of the Crack Sets before the photometric procedure, see page 51. | D. With Prove 600. | E. With Prove 100 and 300. | • Only with NOVA 60

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And for more information, visit:

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Method	Reference to norms and standards / Comments	Pipette volume [mL]	Cell size [mm] NOVA/Prove	Accuracy [mg/L]	Areas of application
-	for 8 – 16 quality tests, analogous DIN EN ISO 9562	5.0 / 10.0	-	-	5, 8, 9, 10, 11, 13, 15, 18
Silver DDTC	analogous EPA 206.4, APHA 3500-As B, ASTM D2972-08A	1.0 + 5.0 + 20 (+ 350)	10, 20	±0.003	5, 8, 9, 10, 11, 13, 15, 18
-	additionally required for Arsenic measurement	-	-	-	
-	additionally required for Arsenic measurement	-	-	-	
-	for multiple use, additionally required for Arsenic measurement	-	-	-	
mod. Winkler method	-	-	-	±0.5	2, 8, 9, 10, 11, 13, 16, 18
-	for 12 x 1 L nutrient salt solution, additionally required for BOD measurement, anal. DIN EN 1899	20	-	-	
-	4 bottles are necessary for 1 determination, 6 for 2, 8 for 3 etc.	-	-	-	
-	for 10 x 1 L standard solution, analogous DIN EN 1899	-	-	-	
Rosocyanine	analogous EPA 212.3, ASTM D3082-09, APHA 4500-B B	0.5 + 0.8 + 1.0 + 1.5 + 5.0 + 6.0	10	±0.030	1, 9, 11, 13, 15, 18
Azomethine H	analogous DIN 38405-17	1.0 + 4.0	-	±0.09	1, 9, 11, 13, 15, 16, 18
3,3'- Dimethyl-naphthidine	Application, see more information in Prove and NOVA manual	10 + 0.10 + 0.20	100 50		7, 9, 13, 15
DPD	-	10	10, 20, 50	±0.047	5, 7, 9, 17, 18
Cadion derivative	-	0.2 + 1.0 + 10	10, 20, 50	±0.0039	5, 8, 9, 10, 11, 13, 15, 18
Cadion derivative	-	0.2 + 5.0	-	±0.025	5, 8, 9, 10, 11, 13, 15, 18
Phthalein derivat	-	0.5 + 5.0	10	±0.11	2, 3, 5, 9, 11, 12, 13
Glyoxalbis-hydroxyanil	for determinations in the low measuring range see manual NOVA / Prove	0.5 + 5.0 0.10 + 5.0	10 10, 20	±1.8 ±3	1, 2, 5, 6, 9, 13, 15, 16,

Areas of application:

3 Beverages	7 Disinfection control	11 Environment	15 Mineral water
4 Biotechnology, fermenter	8 Disposal drainage water	12 Food testing	16 Seawater
1 Agriculture	9 Drinking water	13 Groundwater, surface water	17 Swimming pools
2 Aquaculture	10 Electroplating surface refinement	14 Milk dairy products	18 Wastewater
5 Boiler water, cooling water			

Spectroquant® Test Kits

Parameters C

Parameter	Measuring range of the Spectroquant® instruments [mg/L]				Citation form	No. of tests	Ord. No.
	Prove 100/300/600	NOVA 30/60	Multy	Move 100			
 Calcium Cell Test	10 – 250	10 – 250	10 – 250	10 – 250	Ca	25	1.00858.0001
	14 – 350	14 – 350	14 – 350	14 – 350	CaO		
	25 – 624	25 – 624	25 – 625	25 – 625	CaCO ₃		
Carbohydrazide							
Chloride Test	0.10 – 5.00	0.10 – 5.00	0.50 – 5.00	0.50 – 5.00	Cl	100	1.01807.0001
Chloride Cell Test	0.5 – 15.0	0.5 – 15.0	0.5 – 15.0	0.5 – 15.0	Cl	25	1.01804.0001
Chloride Test	2.5 – 250	2.5 – 250 •	10 – 250	10 – 250	Cl	100	1.14897.0001
						175	1.14897.0002
Chloride Cell Test	5 – 125	5 – 125	5 – 125	5 – 125	Cl	25	1.14730.0001
 Chlorine Test (free chlorine) ^{B.2)}	0.010 – 6.00	0.010 – 6.00 •	0.02 – 6.00	0.02 – 6.00	Cl ₂	200	1.00598.0002
						1,200	1.00598.0001
 Chlorine Cell Test ^{A)} (free chlorine) ^{B.2)}	0.03 – 6.00	0.03 – 6.00	0.05 – 5.00	0.05 – 5.00	Cl ₂	200	1.00595.0001
 Chlorine Test (total chlorine) ^{B.3)}	0.010 – 6.00	0.010 – 6.00 •	0.02 – 6.00	0.02 – 6.00	Cl ₂	200	1.00602.0001
						1,200	1.00602.0002
 Chlorine Test 100 tests free chlorine + 100 tests chlorine (total) ^{B.3)}	0.010 – 6.00	0.010 – 6.00 •	0.02 – 6.00	0.02 – 6.00	Cl ₂	200	1.00599.0001
 Chlorine Cell Test ^{A)} 100 tests free chlorine + 100 tests chlorine (total) ^{B.3)}	0.03 – 6.00	0.03 – 6.00	0.05 – 5.00	0.05 – 5.00	Cl ₂	200	1.00597.0001
Chlorine Reagent Cl ₂ -1 (liquid) ^{F)}	0.03 – 6.00	0.03 – 6.00	0.02 – 6.00	0.02 – 6.00	Cl ₂	200	1.00086.0001
Chlorine Reagent Cl ₂ -2 (liquid) ^{F)}	0.03 – 6.00	0.03 – 6.00	0.02 – 6.00	0.02 – 6.00	Cl ₂	400	1.00087.0001
Chlorine Reagent Cl ₂ -3 (liquid) ^{F)}	0.03 – 6.00	0.03 – 6.00	0.02 – 6.00	0.02 – 6.00	Cl ₂	600	1.00088.0001
Cells and accessories for the photometric chlorine measurement with liquid reagents 1.00086, 1.00087 and 1.00088	–	–	–	–	Cl ₂	25	1.00089.0001
Chlorine Dioxide Test	0.020 – 10.00	0.020 – 10.00 •	0.05 – 10.00	0.05 – 10.00	ClO ₂	200	1.00608.0001
Chlorophyll-a and Phaeophytin-a	–	–	–	–	Chl-a	–	–
					Phaeo		
Chlorophyll-a, -b, -c	–	–	–	–	Chl-a	–	–
					Chl-b		
					Chl-c		














A. The cell test contains four 16 mm cells with a bar-code label. After measurement, the cells can be emptied and cleaned for subsequent measurements. | B. This method is officially recognized by the USEPA as an alternative method for the investigation of 1. wastewater, 2. drinking water 3. drinking water and wastewater. | F. Combination for free or total chlorine, see comment cells and accessories Ord. No. 1.00089.0001. | • Only with NOVA 60

Method	Reference to norms and standards / Comments	Pipette volume [mL]	Cell size [mm] NOVA/Prove	Accuracy [mg/L]	Areas of application
Phthalein complexone	-	0.5 + 1.0	-	±9	1, 2, 5, 6, 9, 13, 15
	see Oxygen Scavengers Test				
Iron(III)-thiocyanate	analogous EPA 325.1, APHA 4500-Cl ⁻ E	0.20 + 10	50	±0.10	2, 5, 6, 9, 12, 13, 15, 18
Iron(III)-thiocyanate	analogous EPA 325.1, APHA 4500-Cl ⁻ E	0.25 + 10	-	±0.3	2, 5, 6, 9, 12, 13, 15, 18
Iron(III)-thiocyanate	analogous EPA 325.1, APHA 4500-Cl ⁻ E	1.0 + 5.0 + 0.5	10	±1.0	1, 2, 5, 6, 8, 9, 10, 12, 13, 15, 16, 18
Iron(III)-thiocyanate	analogous EPA 325.1, APHA 4500-Cl ⁻ E	0.5 + 1.0	-	±5	1, 2, 5, 6, 8, 9, 10, 12, 13, 15, 16, 18
DPD	analogous EPA 330.5, APHA 4500-Cl ₂ G, DIN EN ISO 7393-2	10	10, 20, 50	±0.034	2, 5, 7, 9, 13, 17, 18
DPD	analogous EPA 330.5, APHA 4500-Cl ₂ G, DIN EN ISO 7393-2	5.0	-	±0.15	2, 5, 7, 9, 13, 17, 18
DPD	analogous EPA 330.5, APHA 4500-Cl ₂ G, DIN EN ISO 7393-2	10	10, 20, 50	±0.032	2, 5, 7, 9, 13, 17, 18
DPD	analogous EPA 330.5, APHA 4500-Cl ₂ G, DIN EN ISO 7393-2	10	10, 20, 50	±0.032	2, 5, 7, 9, 13, 17, 18
DPD	analogous EPA 330.5, APHA 4500-Cl ₂ G, DIN EN ISO 7393-2	5.0	-	±0.11	2, 5, 7, 9, 13, 17, 18
DPD	analogous EPA 330.5, APHA 4500-Cl ₂ G, DIN EN ISO 7393-2	10	16, 50	±0.036	2, 5, 7, 9, 13, 17, 18
DPD	analogous EPA 330.5, APHA 4500-Cl ₂ G, DIN EN ISO 7393-2	10	16, 50	±0.036	2, 5, 7, 9, 13, 17, 18
DPD	analogous EPA 330.5, APHA 4500-Cl ₂ G, DIN EN ISO 7393-2	10	16, 50	±0.036	2, 5, 7, 9, 13, 17, 18
DPD	additionally required for Chlorine Reagent Cl ₂ -1, Cl ₂ -2, Cl ₂ -3 for free chlorine: Cl ₂ -1 and Cl ₂ -2 for total chlorine: Cl ₂ -1, Cl ₂ -2 and Cl ₂ -3 Measuring range of NOVA 30: 0.03 – 6.00 mg/L Cl ₂	-	-	-	
DPD	analogous APHA 4500-ClO ₂ D, DIN 38408-5	10	10, 20, 50	±0.045	5, 7, 9, 15, 17
-	Application on Prove, analogous APHA 10200 H, ASTM D3731-87, DIN 38412, ISO 10260	-	10, 20, 50	-	1, 2, 13
Trichromatic Method	Application on Prove, analogous APHA 10200 H, ASTM D3731-87	-	10, 50	-	1, 2, 13

Areas of application:	3 Beverages	7 Disinfection control	11 Environment	15 Mineral water
	4 Biotechnology, fermenter	8 Disposal drainage water	12 Food testing	16 Seawater
1 Agriculture	5 Boiler water, cooling water	9 Drinking water	13 Groundwater, surface water	17 Swimming pools
2 Aquaculture	6 Construction-material industry	10 Electroplating surface refinement	14 Milk dairy products	18 Wastewater

Spectroquant® Test Kits

Parameters C

Parameter	Measuring range of the Spectroquant® instruments [mg/L]				Citation form	No. of tests	Ord. No.
	Prove 100/300/600	NOVA 30/60	Multy	Move 100			
 Chromate Test ^C for the determination of chromium (VI)	0.010 – 3.00 0.02 – 6.69	0.010 – 3.00 • 0.02 – 6.69	10 – 1,400 µ/L 22 – 3,123 µ/L	10 – 1,400 µ/L 22 – 3,123 µ/L	Cr CrO ₄	250	1.14758.0001
 Chromate Cell Test for the determination of chromium (VI) and chromium (total) ^{B.1)}	0.05 – 2.00 0.11 – 4.46	0.05 – 2.00 0.11 – 4.46	0.05 – 2.00 0.11 – 4.46	0.05 – 2.00 0.11 – 4.46	Cr CrO ₄	25	1.14552.0001
Chromium in electroplating baths (inherent color)	4.0 – 400 g/L	4.0 – 400 g/L	–	–	CrO ₃	–	–
 COD Cell Test ^{B.1)}	4.0 – 40.0	4.0 – 40.0	–	–	COD	25	1.14560.0001
 COD Cell Test	5.0 – 80.0	5.0 – 80.0	5.0 – 80.0	5.0 – 80.0	COD	25	1.01796.0001
 COD Cell Test ^{B.1)}	10 – 150	10 – 150	10 – 150	10 – 150	COD	25	1.14540.0001
 COD Cell Test ^{B.1)}	15 – 300	15 – 300	15 – 300	15 – 300	COD	25	1.14895.0001
 COD Cell Test ^{B.1)}	25 – 1,500	25 – 1,500	25 – 1,500	25 – 1,500	COD	25	1.14541.0001
 COD Cell Test ^{B.1)}	50 – 500	50 – 500	50 – 500	50 – 500	COD	25	1.14690.0001
 COD Cell Test ^{B.1)}	300 – 3,500	300 – 3,500	300 – 3,500	300 – 3,500	COD	25	1.14691.0001
 COD Cell Test ^{B.1)}	500 – 10,000	500 – 10,000	500 – 10,000	500 – 10,000	COD	25	1.14555.0001
 COD Cell Test	5,000 – 90,000	5,000 – 90,000	5,000 – 90,000	5,000 – 90,000	COD	25	1.01797.0001
 COD Cell Test for seawater / high chloride contents	5.0 – 60.0	5.0 – 60.0	5.0 – 60.0	5.0 – 60.0	COD	25	1.17058.0001
 COD Cell Test for seawater / high chloride contents	50 – 3,000	50 – 3,000	50 – 3,000	50 – 3,000	COD	25	1.17059.0001
COD Cell Test for seawater / chloride: Absorption tube	–	–	–	–		1 piece	1.15955.0001
COD Cell Test for seawater / chloride: Sodalime	–	–	–	–		500 g 2,500 g	1.06733.0501 1.06733.2500
COD Cell Test for seawater / chloride: Sulfuric Acid for COD determ.	–	–	–	–		1 L	1.17048.1000

B. This method is officially recognized by the USEPA as an alternative method for the investigation of 1. wastewater, 2. drinking water 3. drinking water and wastewater. | C. For determination of total content of this parameter, use one of the Crack Sets before the photometric procedure, see page 51. | • Only with NOVA 60



NO Spectroquant® photometer?






To use Spectroquant® test kits with other photometer brands, download our free programming data from: www.service-test-kits.com

Method	Reference to norms and standards / Comments	Pipette volume [mL]	Cell size [mm] NOVA/Prove	Accuracy [mg/L]	Areas of application
Diphenylcarbazide	analogous APHA 3500-Cr B, DIN 38405-24	5.0	10, 20, 50	±0.012	2, 5, 6, 8, 9, 10, 11, 13, 14, 15, 16, 18
Diphenylcarbazide	analogous APHA 3500-Cr B, DIN 38405-24	5.0 (+10)	-	±0.04	2, 5, 6, 8, 10, 11, 13, 14, 16, 18
-	Application, see more information in Prove and NOVA manual	5.0 + 4.0	10, 20, 50	-	10
Oxidation with chromosulfuric acid, determination as chromate	analogous EPA 410.4, APHA 5220 D, ASTM D1252-06B, ISO 15705	3.0	-	±1.5	2, 5, 6, 9, 11, 13, 15, 18
Oxidation with chromosulfuric acid, determination as chromate	analogous EPA 410.4, APHA 5220 D, ASTM D1252-06B, ISO 15705	2.0	-	±1.8	2, 6, 5, 9, 11, 13, 15, 18
Oxidation with chromosulfuric acid, determination as chromate	analogous EPA 410.4, APHA 5220 D, ASTM D1252-06B, ISO 15705	3.0	-	±7	2, 5, 6, 11, 13, 18
Oxidation with chromosulfuric acid, determination as chromate	analogous EPA 410.4, APHA 5220 D, ASTM D1252-06B, ISO 15705	2.0	-	±8	2, 5, 6, 11, 13, 18
Oxidation with chromosulfuric acid, determination as chromium(III)	analogous EPA 410.4, APHA 5220 D, ASTM D1252-06B, ISO 15705	3.0	-	±29	2, 8, 10, 11, 18
Oxidation with chromosulfuric acid, determination as chromate	analogous EPA 410.4, APHA 5220 D, ASTM D1252-06B, ISO 15705	2.0	-	±13	2, 8, 10, 11, 18
Oxidation with chromosulfuric acid, determination as chromium(III)	analogous EPA 410.4, APHA 5220 D, ASTM D1252-06B, ISO 15705	2.0	-	±63	8, 10, 11, 18
Oxidation with chromosulfuric acid, determination as chromium(III)	analogous EPA 410.4, APHA 5220 D, ASTM D1252-06B, ISO 15705	1.0	-	±143	1, 3, 8, 10, 11, 12, 14, 18
Oxidation with chromosulfuric acid, determination as chromium(III)	analogous EPA 410.4, APHA 5220 D, ASTM D1252-06B, ISO 15705	0.1	-	±1,151	1, 3, 8, 10, 11, 12, 14, 16, 18
Oxidation with chromosulfuric acid, determination as chromate	chloride depletion method corresponds to DIN 38409-41-2, method corresponds to DIN ISO 15705, analogous EPA 410.4, APHA 5220 D and ASTM D1252-06 B	20 + 25 + 5.0	-	±3.0	2, 3, 4, 6, 8, 10, 11, 13, 16, 18
Oxidation with chromosulfuric acid, determination as chromium(III)	chloride depletion method corresponds to DIN 38409-41-2, method corresponds to DIN ISO 15705, analogous EPA 410.4, APHA 5220 D and ASTM D1252-06 B	20 + 25 + 3.0	-	±44	2, 3, 4, 6, 8, 10, 11, 13, 16, 18
-	additionally required for COD Cell Test for seawater / high chloride contents	-	-	-	
-	additionally required for COD Cell Test for seawater / high chloride contents	-	-	-	
-	additionally required for COD Cell Test for seawater / high chloride contents	-	-	-	

- Areas of application:**
- | | | | |
|----------------------------------|--------------------------------------|-------------------------------|-------------------|
| 3 Beverages | 7 Disinfection control | 11 Environment | 15 Mineral water |
| 4 Biotechnology, fermenter | 8 Disposal drainage water | 12 Food testing | 16 Seawater |
| 1 Agriculture | 9 Drinking water | 13 Groundwater, surface water | 17 Swimming pools |
| 2 Aquaculture | 10 Electroplating surface refinement | 14 Milk dairy products | 18 Wastewater |
| 5 Boiler water, cooling water | | | |
| 6 Construction-material industry | | | |

Spectroquant® Test Kits

Parameters C

Parameter	Measuring range of the Spectroquant® instruments [mg/L]				Citation form	No. of tests	Ord. No.
	Prove 100/300/600	NOVA 30/60	Multy	Move 100			
 COD Cell Test (Hg free)	10 – 150	10 – 150	10 – 150	10 – 150	COD	25	1.09772.0001
 COD Cell Test (Hg free)	100 – 1,500	100 – 1,500	100 – 1,500	100 – 1,500	COD	25	1.09773.0001
Color, ADMI	2.0 – 500	–	–	–	–	–	–
Color, Hazen	0.2 – 500	0.2 – 500 •	–	–	Pt, Pt/Co, Hazen, CU	–	–
Color, Hazen	0 – 1,000 (at 445, 455, 465 nm)	0 – 1,000 • (at 445 nm)	0 – 1,000 (at 430 nm)	25 – 1,000 (at 430 nm)	Pt, Pt/Co, Hazen, CU	–	–
Color, Spectral Absorption Coefficient	0.1 – 250 m ⁻¹	0.1 – 50.0 m ⁻¹ •	–	–	–	–	–
Color, true color	2 – 2,500	–	–	–	Pt, Pt/Co, CU	–	–
Copper Test 	0.02 – 6.00	0.02 – 6.00 •	0.10 – 6.00	0.10 – 6.00	Cu	250	1.14767.0001
Copper Cell Test 	0.05 – 8.00	0.05 – 8.00	0.05 – 8.00	0.05 – 8.00	Cu	25	1.14553.0001
Copper in electroplating baths (inherent color)	2.0 – 80.0 g/L	2.0 – 80.0 g/L	–	–	Cu	–	–
Cyanide Test (free and readily liberated cyanide)	0.0020 – 0.500	0.0020 – 0.500 •	5 – 200 µg/L	5 – 200 µg/L	CN	100	1.09701.0001
 Cyanide Cell Test (free and readily liberated cyanide) ^{B.1)}	0.010 – 0.500	0.010 – 0.500	10 – 350 µg/L	10 – 350 µg/L	CN	25	1.14561.0001
Cyanide Cell test (free cyanide)	0.010 – 0.500	0.010 – 0.500	10 – 350 µg/L	10 – 350 µg/L	CN	25	1.02531.0001
Cyanuric Acid Test	2 – 160	2 – 160 •	2 – 160	2 – 160	Cyanuric acid	100	1.19253.0001



cyanide okay?

Need to just check free cyanide in water? Our cell tests speeds up your time to result with only 2 steps and has fewer reagents, so it lowers your costs and protects the environment.

B. This method is officially recognized by the USEPA as an alternative method for the investigation of 1. wastewater, 2. drinking water 3. drinking water and wastewater. | C. For determination of total content of this parameter, use one of the Crack Sets before the photometric procedure, see page 51. | • Only with NOVA 60

Method	Reference to norms and standards / Comments	Pipette volume [mL]	Cell size [mm] NOVA/Prove	Accuracy [mg/L]	Areas of application
Oxidation with chromosulfuric acid, determination as chromate	-	2.0	-	±8	9, 11, 13, 18
Oxidation with chromosulfuric acid, determination as chromium(III)	-	2.0	-	±32	11, 18
own coloring	physical measurement, analogous to APHA 2120 F	-	10, 50	-	
own coloring	physical measurement, corresponds to APHA 2120 B, DIN EN ISO 6271-2, at 340 nm	-	10, 20, 50	-	
own coloring	physical measurement, corresponds to APHA 2120 B, DIN EN ISO 6271-2	-	50	-	
own coloring	physical measurement according EN ISO 7887, at 445, 525 and 620 nm with NOVA 60, at 436, 525 and 620 nm with Prove 100/300/600	-	10, 20, 50	-	
own coloring	physical measurement according EN ISO 7887, at 410 nm	-	10, 20, 50	-	
Cuprizone	-	5.0	10, 20, 50	±0.034	1, 2, 5, 6, 8, 9, 10, 11, 13, 16, 18
Cuprizone	-	5.0	-	±0.13	1, 2, 5, 6, 8, 9, 10, 11, 13, 16, 18
-	Application, see more information in Prove and NOVA manual	25 + 5.0	10, 20, 50		10
Barbituric acid, pyridine-carboxylic acid	analogous EPA 335.2, APHA 4500-CN ⁻ E, ASTM D2036-09D, ISO 6703, DIN 38405-13	5.0 + 10	10, 20, 50	±0.0025	8, 9, 10, 11, 13, 15, 18
Barbituric acid, pyridine-carboxylic acid	analogous EPA 335.2, APHA 4500-CN ⁻ E, ASTM D2036-09D, ISO 6703, DIN 38405-13	5.0 + 10	-	±0.013	8, 9, 10, 11, 13, 15, 18
Barbituric acid, pyridine-carboxylic acid	analogous EPA 335.2, APHA 4500-CN ⁻ E, ASTM D2036-09D, ISO 6703, DIN 38405-13	5.0	-	±0.013	8, 9, 10, 11, 13, 15, 18
Turbidity	-	5.0	20	±5	7, 11, 17



Analyzing COD

Analyzing COD in water or wastewater?
Our nine COD cell tests cover the entire measuring range from 4.0 to 90,000 mg/L. Get fast, error-free results – without sample dilution.

Areas of application:	3 Beverages	7 Disinfection control	11 Environment	15 Mineral water
1 Agriculture	4 Biotechnology, fermenter	8 Disposal drainage water	12 Food testing	16 Seawater
2 Aquaculture	5 Boiler water, cooling water	9 Drinking water	13 Groundwater, surface water	17 Swimming pools
	6 Construction-material industry	10 Electroplating surface refinement	14 Milk dairy products	18 Wastewater

Spectroquant® Test Kits

Parameters D-L

Parameter	Measuring range of the Spectroquant® instruments [mg/L]				Citation form	No. of tests	Ord. No.
	Prove 100/300/600	NOVA 30/60	Multy	Move 100			
D DEHA (Diethylhydroxylamine)							
Detergents							
F Fluoride Cell Test	0.025 - 0.500 0.10 - 1.80	0.025 - 0.500 • 0.10 - 1.80 •	0.10 - 1.80	0.10 - 1.80	F	25	1.00809.0001
Fluoride Test	0.02 - 2.00	0.02 - 2.00 •	0.08 - 2.00	0.08 - 2.00	F	250	1.00822.0250
Fluoride Test	0.10 - 20.0	0.10 - 20.0 •	0.10 - 2.00	0.10 - 2.00	F	100 250	1.14598.0001 1.14598.0002
Formaldehyde Test	0.02 - 8.00	0.02 - 8.00 •	-	-	HCHO	100	1.14678.0001
Formaldehyde Cell Test	0.10 - 8.00	0.10 - 8.00	-	-	HCHO	25	1.14500.0001
G Gold Test	0.5 - 12.0	0.5 - 12.0	-	-	Au	75	1.14821.0002
H Hardness							
Hazen Color Number (Pt/Co / APHA / Hazen)	0 - 1,000	0 - 1,000	0 - 1,000	25 - 1,000	Pt, Pt/Co, Hazen, CU		
Hydrazine Test	0.005 - 2.00	0.005 - 2.00 •	10 - 1,200 µ/L	10 - 1,200 µ/L	N ₂ H ₄	100	1.09711.0001
Hydrogen Peroxide Test	0.015 - 6.00	0.015 - 6.00 •	0.02 - 5.50	0.02 - 5.50	H ₂ O ₂	100	1.18789.0001
Hydrogen Peroxide Cell Test	2.0 - 20.0 0.25 - 5.00	2.0 - 20.0 • 0.25 - 5.00 •	-	-	H ₂ O ₂ H ₂ O ₂	25	1.14731.0001
Hydrogen sulfide							
Hydroquinone							
I Iodine color number	0.010 - 50.0	0.010 - 50.0 •	-	-	IFZ	-	
Iodine Test	0.050 - 10.00	0.050 - 10.00	0.10 - 5.00	0.10 - 5.00	I ₂	200	1.00606.0001
Iron Test ^C	0.0005 - 0.0100 ^D 0.0025 - 5.00 ^D 0.005 - 5.00	0.005 - 5.00 •	0.01 - 2.00	0.01 - 2.00	Fe	250 1,000	1.14761.0002 1.14761.0001
Iron Test ^C	0.010 - 5.00	0.010 - 5.00 •	0.10 - 5.00	0.10 - 5.00	Fe	150	1.00796.0001
Iron Cell Test ^C	0.05 - 4.00	0.05 - 4.00	0.05 - 4.00	0.05 - 4.00	Fe	25	1.14549.0001
Iron Cell Test ^C	1.0 - 50.0	1.0 - 50.0	-	-	Fe	25	1.14896.0001
Isoascorbic acid (erythorbic acid)							
L Lead Test ^C	0.010 - 5.00	0.010 - 5.00 •	0.05 - 5.00	0.05 - 5.00	Pb	50	1.09717.0001
Lead Cell Test ^C	0.10 - 5.00	0.10 - 5.00	0.10 - 5.00	0.10 - 5.00	Pb	25	1.14833.0001

^C. For determination of total content of this parameter, use one of the Crack Sets before the photometric procedure, see page 51. | ^D. With Prove 600. | • Only with NOVA 60

Method	Reference to norms and standards / Comments	Pipette volume [mL]	Cell size [mm] NOVA/Prove	Accuracy [mg/L]	Areas of application
	see Oxygen Scavengers Test				
	see Surfactants				
Alizarin complexone	analogous EPA 340.3, APHA 4500-F ⁻ E	10	50	±0.024	9, 10, 11, 13, 15, 18
	for determinations in the low measuring range see manual NOVA / Prove	5.0	-	±0.06	
SPADNS method	analogous to APHA 4500-F ⁻ D	5.0 + 1.0	50	±0.04	8, 9, 10, 11, 13, 15, 16, 18
Alizarin complexone	analogous EPA 340.3, APHA 4500-F ⁻ E	0.5 + 2.0 + 5.0	10	±0.12	9, 10, 11, 13, 15, 16, 18
Chromotropic acid	-	3.0 + 4.5	10, 20, 50	±0.03	7, 9, 10, 11, 15, 18
Chromotropic acid	-	2.0	-	±0.18	7, 9, 10, 11, 15, 18
Rhodamine B	-	2.0 + 6.0	10	±0.4	10, 13, 16,
	see Total Hardness or Residual Hardness				
own coloring	see Color, Hazen	-	10, 20, 50	-	5, 9, 10, 11, 12, 13, 15, 18
4-(Dimethylamino)-benzaldehyde	analogous DIN 38413-1	2.0 + 5.0	10, 20, 50	±0.007	5
Neocuproin	-	8.0 + 0.5	10, 20	±0.033	3, 7, 9, 11, 12, 13, 14, 15
Titanyl sulfate	analogous DIN 38409-15	10	-	±0.9	3, 7, 9, 11, 12, 13,
	for determinations in the low measuring range see manual of instrument	10	50		14, 15, 18
	see Sulfide				
	see Oxygen Scavengers Test				
own coloring	corresponds to DIN 6162 A	-	10, 20, 50	-	3, 11, 12
DPD	-	10	10, 20, 50	±0.060	7, 9, 17
Triazine	-	5.0	100 100 10, 20, 50	±0.014	1, 2, 5, 6, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18
1,10-Phenanthroline	differentiation between Fe(II) and Fe(III) possible, analogous APHA 3500-Fe B, DIN 38406-1	0.5 + 8.0	10, 20, 50	±0.024	1, 2, 5, 6, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18
Triazine	-	5.0	-	±0.06	1, 2, 6, 8, 9, 10, 11, 12, 13, 15, 16, 18
2,2'-Bipyridine	differentiation between Fe(II) and Fe(III) possible	1.0	-	±0.9	6, 8, 10, 11, 13, 18
	see Oxygen Scavengers Test				
PAR	-	0.5 + 8.0	10, 20, 50	±0.028	2, 5, 8, 9, 10, 11, 15, 18
PAR	-	5.0	-	±0.08	1, 2, 6, 9, 10, 12, 13, 15, 18

Areas of application:

3 Beverages	7 Disinfection control	11 Environment	15 Mineral water
4 Biotechnology, fermenter	8 Disposal drainage water	12 Food testing	16 Seawater
1 Agriculture	9 Drinking water	13 Groundwater, surface water	17 Swimming pools
2 Aquaculture	10 Electroplating surface refinement	14 Milk dairy products	18 Wastewater

Spectroquant® Test Kits

Parameters M-N

Parameter	Measuring range of the Spectroquant® instruments [mg/L]				Citation form	No. of tests	Ord. No.
	Prove 100/300/600	NOVA 30/60	Multy	Move 100			
M Magnesium Cell Test	5.0 – 75.0	5.0 – 75.0	5.0 – 75.0	5.0 – 75.0	Mg	25	1.00815.0001
Manganese Test	0.005 – 2.00	0.005 – 2.00 •	0.05 – 1.80	0.05 – 1.80	Mn	250	1.01846.0001
Manganese Test	0.010 – 10.00	0.010 – 10.00 •	0.05 – 6.00	0.05 – 6.00	Mn	250 500	1.14770.0002 1.14770.0001
Manganese Cell Test	0.10 – 5.00	0.10 – 5.00	0.10 – 5.00	0.10 – 5.00	Mn	25	1.00816.0001
Mercury	0.025 – 1.000	0.025 – 1.000	–	–	Hg	–	–
Methylethylketoxime (2-Butanoneoxime)							
Molybdenum Cell Test	0.02 – 1.00 0.03 – 1.67 0.04 – 2.15	0.02 – 1.00 • 0.03 – 1.67 • 0.04 – 2.15 •	0.02 – 1.00 0.03 – 1.67 0.04 – 2.15	0.02 – 1.00 0.03 – 1.67 0.04 – 2.15	Mo MoO ₄ ²⁺ Na ₂ MoO ₄	25	1.00860.0001
Monochloramine Test	0.050 – 10.00 0.036 – 7.26 0.010 – 1.98	0.050 – 10.00 • 0.036 – 7.26 • 0.010 – 1.98 •	0.10 – 5.00 0.07 – 3.63 0.02 – 0.99	0.10 – 5.00 0.07 – 3.63 0.02 – 0.99	Cl ₂ NH ₂ Cl NH ₂ Cl-N	150	1.01632.0001
N Nickel Test ^C	0.02 – 5.00	0.02 – 5.00 •	0.05 – 5.00	0.05 – 5.00	Ni	250	1.14785.0001
Nickel Cell Test ^C	0.10 – 6.00	0.10 – 6.00	0.10 – 6.00	0.10 – 6.00	Ni	25	1.14554.0001
Nickel in electroplating baths (inherent color)	2.0 – 120 g/L	2.0 – 120 g/L	–	–	Ni	–	–
Nitrate (UV)	0.0 – 7.0	–	–	–	NO ₃ -N	–	–
USEPA approved Nitrate Test ^{B,3} ^C	0.10 – 25.0 0.4 – 110.7	0.10 – 25.0 • 0.4 – 110.7 •	–	–	NO ₃ -N NO ₃	100 250	1.09713.0001 1.09713.0002
USEPA approved Nitrate Test ^{B,3} ^C	0.2 – 20.0 0.89 – 88.5	0.2 – 20.0 • 0.89 – 88.5 •	0.5 – 15.0 2.2 – 66.4	0.5 – 15.0 2.2 – 66.4	NO ₃ -N NO ₃	100	1.14773.0001
USEPA approved Nitrate Test ^{B,3} ^C	0.3 – 30.0 1.3 – 132.8	0.3 – 30.0 • 1.3 – 132.8 •	0.3 – 30.0 1.3 – 132.8	0.3 – 30.0 1.3 – 132.8	NO ₃ -N NO ₃	100	1.01842.0001
USEPA approved Nitrate Cell Test ^{B,3} ^C	0.5 – 18.0 2.2 – 79.7	0.5 – 18.0 2.2 – 79.7	0.5 – 15.0 2.2 – 66.4	0.5 – 15.0 2.2 – 66.4	NO ₃ -N NO ₃	25	1.14542.0001
USEPA approved Nitrate Cell Test ^{B,3} ^C	0.5 – 25.0 2.2 – 110.7	0.5 – 25.0 2.2 – 110.7	–	–	NO ₃ -N NO ₃	25	1.14563.0001
USEPA approved Nitrate Cell Test ^{B,3} ^C	1.0 – 50.0 4 – 221	1.0 – 50.0 4 – 221	–	–	NO ₃ -N NO ₃	25	1.14764.0001
USEPA approved Nitrate Cell Test ^{B,3}	23 – 225 102 – 996	23 – 225 102 – 996	–	–	NO ₃ -N NO ₃	25	1.00614.0001

B. This method is officially recognized by the USEPA as an alternative method for the investigation of 1. wastewater, 2. drinking water 3. drinking water and wastewater. | C. For determination of total content of this parameter, use one of the Crack Sets before the photometric procedure, see page 51. | • Only with NOVA 60

ANALYTICAL APPLICATION NOTES FINDER

Struggling with sample preparation for nitrate analysis in soil? Check our application notes on www.merckmillipore.com/aaf > [Photometry](#)








Method	Reference to norms and standards / Comments	Pipette volume [mL]	Cell size [mm] NOVA/Prove	Accuracy [mg/L]	Areas of application
Phthalein complexone	-	1.0	-	±4.0	1, 2, 9, 10, 15, 18
PAN	-	8.0 + 2.0 + 0.25	10, 20, 50	±0.007	1, 2, 9, 10, 13, 15
Formaldioxime	analogous DIN 38406-2	5.0	10, 20, 50	±0.035	1, 2, 9, 10, 13, 15, 18
Formaldioxime	analogous DIN 38406-2	7.0	-	±0.08	1, 2, 10, 13, 18
Michler's thioketone	Application, see more information in Prove and NOVA manual	2.5 + 5.0 + 1.0 + 1.5	50	-	11, 18
see Oxygen Scavengers Test					
Bromopyrogallol red	-	10	-	±0.04	1, 5, 9, 13, 15, 18
Indophenol blue	-	0.6 + 10	10, 20, 50	±0.033	7, 9, 17
Dimethylglyoxime	-	5.0	10, 20, 50	±0.03	3, 5, 8, 9, 10, 11, 13, 15, 18
Dimethylglyoxime	-	5.0	-	±0.11	3, 5, 8, 10, 11, 18
-	Application, see more information in Prove and NOVA manual	5.0	10, 20, 50	-	10
direct measurement in the UV range	Application on Prove 300, analogous to APHA 4500-NO ₃ ⁻ B, quartz cuvette required	50 + 1.0	10	-	9, 13
2,6-Dimethylphenol	analogous DIN 38405-9	0.5 + 4.0	10, 20, 50	±0.11	2, 6, 8, 9, 11, 13, 15, 17, 18
Nitrospectral	-	1.5 + 5.0	10, 20	±0.31	2, 6, 9, 11, 13, 15, 17, 18
Cadmium Reduction	-	10	50	±1.2	1, 2, 6, 8, 9, 10, 11, 13, 15, 17, 18
Nitrospectral	-	1.5	-	±0.5	1, 2, 6, 8, 9, 11, 13, 15, 17, 18
2,6-Dimethylphenol	analogous DIN 38405-9	1.0	-	±0.5	1, 2, 6, 9, 11, 13, 15, 17, 18
2,6-Dimethylphenol	analogous DIN 38405-9	0.5 + 1.0	-	±1.0	1, 2, 8, 9, 11, 13, 15, 18
2,6-Dimethylphenol	analogous DIN 38405-9	0.1 + 1.0	-	±5.0	1, 8, 11, 13, 18

Areas of application:

- | | | | |
|-------------------------------|--------------------------------------|-------------------------------|-------------------|
| 3 Beverages | 7 Disinfection control | 11 Environment | 15 Mineral water |
| 4 Biotechnology, fermenter | 8 Disposal drainage water | 12 Food testing | 16 Seawater |
| 1 Agriculture | 9 Drinking water | 13 Groundwater, surface water | 17 Swimming pools |
| 2 Aquaculture | 10 Electroplating surface refinement | 14 Milk dairy products | 18 Wastewater |
| 5 Boiler water, cooling water | | | |

Spectroquant® Test Kits

Parameters N-P

Parameter	Measuring range of the Spectroquant® instruments [mg/L]				Citation form	No. of tests	Ord. No.
	Prove 100/300/600	NOVA 30/60	Multy	Move 100			
N Nitrate Cell Test in seawater 	0.10 – 3.00	0.10 – 3.00 •	0.10 – 3.00	0.10 – 3.00	NO ₃ -N	25	1.14556.0001
	0.4 – 13.3	0.4 – 13.3 •	0.4 – 13.3	0.4 – 13.3	NO ₃		
 Nitrate Test in seawater	0.2 – 17.0	0.2 – 17.0 •	–	–	NO ₃ -N	50	1.14942.0001
	0.9 – 75.3	0.9 – 75.3 •			NO ₃		
 Nitrite Test ^{B.3)}	0.002 – 1.00	0.002 – 1.00 •	5 – 400 µg/L	5 – 400 µg/L	NO ₂ -N	335	1.14776.0002
	0.007 – 3.28	0.007 – 3.28 •	16 – 1,313 µg/L	16 – 1,313 µg/L	NO ₂	1,000	1.14776.0001
 Nitrite Cell Test ^{B.3)}	0.010 – 0.700	0.010 – 0.700	10 – 700 µg/L	10 – 700 µg/L	NO ₂ -N	25	1.14547.0001
	0.03 – 2.30	0.03 – 2.30	33 – 2,299 µg/L	33 – 2,299 µg/L	NO ₂		
 Nitrite Cell Test ^{B.3)}	1.0 – 90.0	1.0 – 90.0	1.0 – 90.0	1.0 – 90.0	NO ₂ -N	25	1.00609.0001
	3.0 – 295.2	3.3 – 295.2	3.3 – 295.2	3.3 – 295.2	NO ₂		
Nitrogen (total) Cell Test	0.5 – 15.0	0.5 – 15.0	–	–	N	25	1.00613.0001
Nitrogen (total) Cell Test	0.5 – 15.0	0.5 – 15.0	0.5 – 15.0	0.5 – 15.0	N	25	1.14537.0001
Nitrogen (total) Cell Test	10 – 150	10 – 150	–	–	N	25	1.14763.0001
O Organic Carbon, Total							
Oxygen Cell Test	0.5 – 12.0	0.5 – 12.0	0.5 – 12.0	0.5 – 12.0	O ₂	25	1.14694.0001
Oxygen Demand, Biological							
Oxygen Demand, Chemical							
Oxygen Scavengers Test	0.020 – 0.500	0.020 – 0.500 •	0.020 – 0.500	0.020 – 0.500	DEHA	200	1.19251.0001
	0.027 – 0.667	0.027 – 0.667 •	0.027 – 0.667	0.027 – 0.667	Carbohy		
	0.05 – 1.32	0.05 – 1.32 •	0.053 – 1.315	0.053 – 1.315	Hydro		
	0.08 – 1.95	0.08 – 1.95 •	0.078 – 1.950	0.078 – 1.950	ISA		
	0.09 – 2.17	0.09 – 2.17 •	0.087 – 2.170	0.087 – 2.170	MEKO		
Ozone Test	0.010 – 4.00	0.010 – 4.00 •	0.02 – 4.00	0.02 – 4.00	O ₃	200	1.00607.0001
						1,200	1.00607.0002
P Palladium	0.05 – 1.25	0.05 – 1.25 •	–	–	Pd	–	–
Peroxide							
pH Cell Test ^{A)}	pH 6.4 – 8.8	pH 6.4 – 8.8	pH 6.4 – 8.8	pH 6.4 – 8.8	pH	280	1.01744.0001
Phaeophytin-a and Chlorophyll-a							
Phenol Test	0.002 – 0.100	0.002 – 0.100 •	0.10 – 5.00	0.10 – 5.00	Phenol	50 –	1.00856.0001
	0.025 – 5.00	0.025 – 5.00 •				250	
Phenol Cell Test	0.10 – 2.50	0.10 – 2.50 •	0.10 – 2.50	0.10 – 2.50	Phenol	25	1.14551.0001
 Phosphate Test ^{C)} (ortho-phosphate)	0.0025 – 5.00	0.010 – 5.00 •	0.01 – 2.50	0.01 – 2.50	PO ₄ -P	220	1.14848.0002
	0.0077 – 15.30	0.03 – 15.3 •	0.03 – 7.66	0.03 – 7.66	PO ₄	420	1.14848.0001
	0.0057 – 11.46	0.02 – 11.46 •	0.02 – 5.73	0.02 – 5.73	P ₂ O ₅		
	0.0005 – 0.0250 ^{D)}				PO ₄ -P		
	0.0015 – 0.0767 ^{D)}				PO ₄		
 Phosphate Cell Test (ortho-phosphate)	0.05 – 5.00	0.05 – 5.00	0.05 – 4.00	0.05 – 4.00	PO ₄ -P	25	1.00474.0001
	0.2 – 15.3	0.2 – 15.3	0.15 – 12.26	0.15 – 12.26	PO ₄		
	0.11 – 11.46	0.11 – 11.46	0.11 – 9.17	0.11 – 9.17	P ₂ O ₅		

A. The cell test contains three 16 mm cells with a bar-code label. After measurement, the cells can be emptied and cleaned for subsequent measurements. | B. This method is officially recognized by the USEPA as an alternative method for the investigation of 1. wastewater, 2. drinking water 3. drinking water and wastewater. | C. For determination of total content of this parameter, use one of the Crack Sets before the photometric procedure, see page 51. | D. With Prove 600. | • Only with NOVA 60



PHOSPHATE AID

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Method	Reference to norms and standards / Comments	Pipette volume [mL]	Cell size [mm] NOVA/Prove	Accuracy [mg/L]	Areas of application
Resorcinol	-	2.0	-	±0.09	1, 2, 8, 9, 11, 13, 15, 16, 18
Resorcinol	-	1.0 + 1.5 + 5.0	10	±0.4	1, 2, 8, 9, 11, 13, 15, 16, 18
Griess' reaction	analogous EPA 354.1, APHA 4500-NO ₂ ⁻ B, DIN EN 26777	5.0	10, 20, 50	±0.005	2, 5, 8, 9, 10, 11, 13, 15, 16, 18
Griess' reaction	analogous EPA 354.1, APHA 4500-NO ₂ ⁻ B, DIN EN 26777	5.0	-	±0.010	2, 5, 8, 9, 10, 11, 13, 15, 16, 18
Iron sulfate	-	8.0	-	±2.6	5, 10, 13, 16, 18
Koroleff digestion, 2,6-dimethylphenol	digestion analogous DIN EN ISO 11905-1, determination analogous DIN 38405-9	1.0 + 10	-	±0.5	1, 2, 5, 8, 11, 13, 14, 18
Koroleff digestion, nitrospectral	digestion analogous to DIN EN ISO 11905-1	1.5 + 10	-	±0.6	1, 2, 5, 8, 11, 13, 14, 18
Koroleff digestion, 2,6-dimethylphenol	digestion analogous DIN EN ISO 11905-1, determination analogous DIN 38405-9 see TOC	1.0 + 9.0	-	±5.0	1, 8, 11, 14, 18
mod. Winkler method	analogous DIN EN 25813-21 see BOD see COD	-	-	±0.3	2, 5, 11, 13, 17
Iron reduction	-	0.2 + 10	20	±0.022	5
DPD	analogous DIN 38408-3	10	10, 20, 50	±0.023	7, 9, 15, 17
Michlers' thioketone	Application, see more information in Prove and NOVA manual see Hydrogen Peroxide	5.0 + 1.0 + 0.20	10	-	10, 18
Indicator	- see Chlorophyll-a and Phaeophytin-a	10	-	±0.1 pH	2, 5, 7, 9, 13, 15, 16, 17, 1, 2, 13
4-Aminoantipyrine	analogous EPA 420.1, ASTM D1783-01, APHA 5530 C + D, ISO 6439	5.0 + 10 1.0 + 10	20 10, 20, 50	±0.004 ±0.027	8, 9, 11, 13, 16, 18
MBTH		10	-	±0.11	8, 11, 13, 16, 18
Phosphomolybdenum blue	analogous EPA 365.2+3, APHA 4500-P E, DIN EN ISO 6878	5.0	10, 20, 50 100	±0.015	1, 2, 5, 9, 11, 13, 15, 16, 18
Phosphomolybdenum blue	analogous EPA 365.2+3, APHA 4500-P E, DIN EN ISO 6878	5.0	-	±0.08	1, 2, 5, 9, 11, 13, 15, 16, 18

- Areas of application:
- | | | | |
|----------------------------|--------------------------------------|-------------------------------|-------------------|
| 3 Beverages | 7 Disinfection control | 11 Environment | 15 Mineral water |
| 4 Biotechnology, fermenter | 8 Disposal drainage water | 12 Food testing | 16 Seawater |
| 1 Agriculture | 9 Drinking water | 13 Groundwater, surface water | 17 Swimming pools |
| 2 Aquaculture | 10 Electroplating surface refinement | 14 Milk dairy products | 18 Wastewater |

Spectroquant® Test Kits

Parameters P-S

Parameter	Measuring range of the Spectroquant® instruments [mg/L]				Citation form	No. of tests	Ord. No.
	Prove 100/300/600	NOVA 30/60	Multy	Move 100			
 Phosphate Cell Test (ortho-phosphate and total phosphorus) ^{B,3)}	0.05 – 5.00	0.05 – 5.00	0.05 – 4.00	0.05 – 4.00	PO ₄ -P	25	1.14543.0001
	0.2 – 15.3	0.2 – 15.3	0.15 – 12.26	0.15 – 12.26	PO ₄		
	0.11 – 11.46	0.11 – 11.46	0.11 – 9.17	0.11 – 9.17	P ₂ O ₅		
 Phosphate Cell Test (ortho-phosphate)	0.5 – 25.0	0.5 – 25.0	0.5 – 20.0	0.5 – 20.0	PO ₄ -P	25	1.00475.0001
	1.5 – 76.7	1.5 – 76.7	1.5 – 61.3	1.5 – 61.3	PO ₄		
	1.1 – 57.3	1.1 – 57.3	1.1 – 45.8	1.1 – 45.8	P ₂ O ₅		
 Phosphate Cell Test (ortho-phosphate and total phosphorus) ^{B,3)}	0.5 – 25.0	0.5 – 25.0	0.5 – 20.0	0.5 – 20.0	PO ₄ -P	25	1.14729.0001
	1.5 – 76.7	1.5 – 76.7	1.5 – 61.3	1.5 – 61.3	PO ₄		
	1.1 – 57.3	1.1 – 57.3	1.1 – 45.8	1.1 – 45.8	P ₂ O ₅		
 Phosphate Cell Test (ortho-phosphate)	0.5 – 25.0	0.5 – 25.0	0.5 – 25.0	0.5 – 25.0	PO ₄ -P	25	1.14546.0001
	1.5 – 76.7	1.5 – 76.7	1.5 – 76.7	1.5 – 76.7	PO ₄		
	1.1 – 57.3	1.1 – 57.3	1.1 – 57.3	1.1 – 57.3	P ₂ O ₅		
 Phosphate Test (ortho-phosphate)	0.5 – 30.0	0.5 – 30.0 •	0.5 – 30.0	0.5 – 30.0	PO ₄ -P	400	1.14842.0001
	1.5 – 92.0	1.5 – 92.0 •	1.5 – 92.0	1.5 – 92.0	PO ₄		
	1.1 – 68.7	1.1 – 68.7 •	1.1 – 68.7	1.1 – 68.7	P ₂ O ₅		
 Phosphate Test (ortho-phosphate)	1.0 – 100.0	1.0 – 100.0 •	1.0 – 60.0	1.0 – 60.0	PO ₄ -P	100	1.00798.0001
	3 – 307	3 – 307 •	3.1 – 184	3.1 – 184	PO ₄		
	2 – 229	2 – 229 •	2.3 – 137.5	2.3 – 137.5	P ₂ O ₅		
 Phosphate Cell Test (ortho-phosphate)	3.0 – 100.0	3.0 – 100.0	3.0 – 100.0	3.0 – 100.0	PO ₄ -P	25	1.00616.0001
	9 – 307	9 – 307	9 – 307	9 – 307	PO ₄		
	7 – 229	7 – 229	7 – 229	7 – 229	P ₂ O ₅		
 Phosphate Cell Test (ortho-phosphate and total phosphorus)	3.0 – 100.0	3.0 – 100.0	3.0 – 100.0	3.0 – 100.0	PO ₄ -P	25	1.00673.0001
	9 – 307	9 – 307	9 – 307	9 – 307	PO ₄		
	7 – 229	7 – 229	7 – 229	7 – 229	P ₂ O ₅		
Platinum	0.10 – 1.25	0.10 – 1.25 •	-	-	Pt	-	-
Platinum-Cobalt Standard Method							
Potassium Cell Test	5.0 – 50.0	5.0 – 50.0	5.0 – 50.0	5.0 – 50.0	K	25	1.14562.0001
Potassium Cell Test	30 – 300	30 – 300	30 – 300	30 – 300	K	25	1.00615.0001
Protein Test	0.01 – 1.4 g/L	0.01 – 1.4 g/L	-	-	Protein	200	1.10306.0500
Protein Test	0.5 – 10 g/L	0.5 – 10 g/L	-	-	Protein	250	1.10307.0500
 Residual Hardness Cell Test	0.50 – 5.00	0.50 – 5.00	0.50 – 5.00	0.50 – 5.00	Ca	25	1.14683.0001
	0.070 – 0.700	0.070 – 0.700	0.070 – 0.700	0.070 – 0.700	°d		
	0.087 – 0.874	0.087 – 0.874	0.087 – 0.874	0.087 – 0.874	°e		
	0.12 – 1.25	0.12 – 1.25	0.12 – 1.25	0.12 – 1.25	°f		
	0.70 – 7.00	0.70 – 7.00	0.70 – 7.00	0.70 – 7.00	CaO		
	1.2 – 12.5	1.2 – 12.5	1.2 – 12.5	1.2 – 12.5	CaCO ₃		
 SAC (Spectral absorption coefficient)	0.5 – 250 m ⁻¹	-	-	-	-	-	-







B. This method is officially recognized by the USEPA as an alternative method for the investigation of 1. wastewater; 2. drinking water 3. drinking water and wastewater. | • Only with NOVA 60

Method	Reference to norms and standards / Comments	Pipette volume [mL]	Cell size [mm] NOVA/Prove	Accuracy [mg/L]	Areas of application
Phosphomolybdenum blue	analogous EPA 365.2+3, APHA 4500-P E, DIN EN ISO 6878	5.0	-	±0.06	1, 2, 5, 9, 11, 13, 15, 16, 18
Phosphomolybdenum blue	analogous EPA 365.2+3, APHA 4500-P E, DIN EN ISO 6878	1.0	-	±0.5	1, 2, 4, 8, 11, 13, 16, 18
Phosphomolybdenum blue	analogous EPA 365.2+3, APHA 4500-P E, DIN EN ISO 6878	1.0	-	±0.4	1, 2, 4, 8, 11, 13, 16, 18
Vanadato-molybdate	analogous APHA 4500-P C	5.0	-	±0.4	5, 16
Vanadato-molybdate	analogous APHA 4500-P C	1.2 + 5.0	10, 20	±0.2	5, 16
Phosphomolybdenum blue	analogous EPA 365.2+3, APHA 4500-P E, DIN EN ISO 6878	0.5 + 8.0	10	±1.4	1, 2, 4, 8, 11, 12, 13, 18
Phosphomolybdenum blue	analogous EPA 365.2+3, APHA 4500-P E, DIN EN ISO 6878	0.2	-	±1.2	1, 4, 8, 11, 13, 16, 18
Phosphomolybdenum blue	analogous EPA 365.2+3, APHA 4500-P E, DIN EN ISO 6878	0.2	-	±1.4	1, 4, 8, 11, 13, 16, 18
-	Application, see more information in Prove and NOVA manual see Color	5.0 + 1.0 + 0.50	10	-	10, 18
Kalignost®, turbidimetric	-	2.0	-	±2.2	9, 12, 13, 15, 16
Kalignost®, turbidimetric	-	0.5	-	±13	1, 16
Bradford Method	Method not programmed in the photometers	-	10	-	
Biuret Method	Method not programmed in the photometers	-	10	-	
Phthalein complexone	-	0.2 + 4.0	-	±0.14	2, 5, 9
-	physical measurement according DIN 38404, at 436 nm (Prove 100) and 254 + 436 nm (Prove 300)	-	10, 20, 50	-	9, 15

Areas of application:	3 Beverages	7 Disinfection control	11 Environment	15 Mineral water
1 Agriculture	4 Biotechnology, fermenter	8 Disposal drainage water	12 Food testing	16 Seawater
2 Aquaculture	5 Boiler water, cooling water	9 Drinking water	13 Groundwater, surface water	17 Swimming pools
	6 Construction-material industry	10 Electroplating surface refinement	14 Milk dairy products	18 Wastewater

Spectroquant® Test Kits

Parameters S

Parameter	Measuring range of the Spectroquant® instruments [mg/L]				Citation form	No. of tests	Ord. No.
	Prove 100/300/600	NOVA 30/60	Multy	Move 100			
S Silicate (Silicic Acid) Test	0.00025 – 0.50000	0.0005 – 0.5000 •	0.004 – 0.500	0.004 – 0.500	SiO ₂	100	1.01813.0001
	0.00012 – 0.23370	0.0002 – 0.2337 •	0.002 – 0.234	0.002 – 0.234	Si	900	1.01813.0002
	0.00025 – 0.02500 ^{D)}				SiO ₂		
	0.00012 – 0.01168 ^{D)}				Si		
Silicate (Silicic Acid) Test	0.011 – 10.70	0.011 – 10.70 •	0.11 – 8.56	0.11 – 8.56	SiO ₂	300	1.14794.0001
	0.005 – 5.00	0.005 – 5.00 •	0.05 – 4.00	0.05 – 4.00	Si		
Silicate (Silicic Acid) Test	1.1 – 1,070	1.1 – 1,070 •	11 – 1,070	11 – 1,070	SiO ₂	100	1.00857.0001
	0.5 – 500	0.5 – 500 •	5 – 500	5 – 500	Si		
Silver Test	0.25 – 3.00	0.25 – 3.00 •	–	–	Ag	100	1.14831.0001
Sodium Cell Test in nutrient solutions for fertilization	10 – 300	10 – 300	10 – 300	10 – 300	Na	25	1.00885.0001
Spectral Absorption Coefficient, Color	0.1 – 250 m ⁻¹	–	–	–	–	–	–
Spectral Attenuation Coefficient	0.5 – 250 m ⁻¹	–	–	–	–	–	–
 Sulfate Test	0.50 – 50.0	0.50 – 50.0 •	1.0 – 25.0	1.0 – 25.0	SO ₄	100	1.01812.0001
 Sulfate Cell Test	1.0 – 50.0	1.0 – 50.0	2.0 – 50.0	2.0 – 50.0	SO ₄	25	1.02532.0001
 Sulfate Cell Test ^{B.1)}	5 – 250	5 – 250	5 – 250	5 – 250	SO ₄	25	1.14548.0001
 Sulfate Test	5 – 300	5 – 300 •	5 – 300	10 – 300	SO ₄	100	1.02537.0001
						1,000	1.02537.0002
Sulfate Test	25 – 300	25 – 300 •	–	–	–	200	1.14791.0001
 Sulfate Cell Test	50 – 500	50 – 500	50 – 500	50 – 500	SO ₄	25	1.00617.0001
 Sulfate Cell Test ^{B.1)}	100 – 1,000	100 – 1,000	100 – 1,000	100 – 1,000	SO ₄	25	1.14564.0001
Sulfide Test	0.020 – 1.50	0.020 – 1.50 •	0.10 – 1.50	0.10 – 1.50	S ²⁻	220	1.14779.0001
Sulfite Cell Test	0.8 – 16.00	0.8 – 16.00 •	1.0 – 20.0	1.0 – 20.0	SO ₂	25	1.14394.0001
	1.0 – 20.00	1.0 – 20.00 •			SO ₃		
	0.05 – 3.00	0.05 – 3.00 •			SO ₃		
	0.04 – 2.40	0.04 – 2.40 •			SO ₂		
Sulfite Test	1.0 – 60.0	1.0 – 60.0 •	1.0 – 60.0	1.0 – 60.0	SO ₃	150	1.01746.0001
	0.8 – 48.0	0.8 – 48.0 •			SO ₂		
Surfactants (anionic) Cell Test	0.05 – 2.00	0.05 – 2.00 •	0.05 – 2.00	0.10 – 2.00	MBAS	25	1.02552.0001
Surfactants (cationic) Cell Test	0.05 – 1.50	0.05 – 1.50 •	0.05 – 1.50	–	CTAB	25	1.01764.0001
Surfactants (nonionic) Cell Test	0.10 – 7.50	0.10 – 7.50	0.10 – 7.50	0.10 – 7.50	Triton® X-100	25	1.01787.0001
Suspended solids	25 – 750	25 – 750	50 – 750	50 – 750	susp. solids	–	–

B. This method is officially recognized by the USEPA as an alternative method for the investigation of 1. wastewater, 2. drinking water 3. drinking water and wastewater. | D. With Prove 600. | • Only with NOVA 60

HIGHER SENSITIVITY

New cell test for anionic surfactants:
now with even higher sensitivity!



Method	Reference to norms and standards / Comments	Pipette volume [mL]	Cell size [mm] NOVA/Prove	Accuracy [mg/L]	Areas of application
Silicomolybdenum blue	analogous APHA 4500-SiO ₂ D+E, ASTM D859-10, DIN 38405-21	10 + 0.5	50 100	±0.00449	5, 9, 13, 15
Silicomolybdenum blue	analogous APHA 4500-SiO ₂ D+E, ASTM D859-10, DIN 38405-21	5.0 + 0.5	10, 20, 50	±0.024	5, 6, 9, 13, 16
Molybdosilicate	analogous APHA 4500-SiO ₂ C	0.5 + 2.0 + 4.0 + 5.0	10	±2.1	5, 6, 9, 13, 15
Eosine, 1,10-phenanthroline	reagents for the digestion in the thermoreactor are included in the test kit	1.0 + 10	10, 20	±0.07	10, 18
Iron(III)-thiocyanate	determination as chloride	0.5	-	±13	1
-	see Color, Spectral Absorption Coefficient	-	-	-	
-	physical measurement according DIN 38404, at 254 nm	-	10, 20, 50	-	
Barium sulfate, turbidimetric	analogous EPA 375.4, APHA 4500-SO ₄ ²⁻ E, ASTM D516-11	0.5 + 10	10, 20, 50	±0.90	1, 2, 6, 9, 11, 13, 15, 18
Barium sulfate, turbidimetric	analogous EPA 375.4, APHA 4500-SO ₄ ²⁻ E, ASTM D516-11	10	-	±1.1	1, 6, 9, 11, 13, 15, 18
Barium sulfate, turbidimetric	analogous EPA 375.4, APHA 4500-SO ₄ ²⁻ E, ASTM D516-11	5.0	-	±8	1, 6, 9, 11, 13, 15, 16
Barium sulfate, turbidimetric	analogous EPA 375.4, APHA 4500-SO ₄ ²⁻ E, ASTM D516-11	0.5 + 5	10	±7	1, 6, 9, 11, 13, 15, 16, 18
Tannic acid	-	2.5	10	±14	6, 9, 11, 13, 15
Barium sulfate, turbidimetric	analogous EPA 375.4, APHA 4500-SO ₄ ²⁻ E, ASTM D516-11	2.0 + 5.0	-	±16	1, 6, 9, 11, 13, 15, 16
Barium sulfate, turbidimetric	analogous EPA 375.4, APHA 4500-SO ₄ ²⁻ E, ASTM D516-11	1.0 + 5.0	-	±33	1, 4, 6, 8, 9, 11, 13, 15, 16, 18
Dimethyl-p-phenylenediamine	analogous EPA 376.2, APHA 4500-S ²⁻ D, ISO 10530, DIN 38405-26	5.0	10, 20, 50	±0.017	2, 8, 9, 11, 13, 15, 18
Ellman's reagent	for determinations of the low measuring range see manual NOVA / Prove	3.0 + 7.0	- - 50 50	±0.4	1, 3, 5, 12, 15, 18
Ellman's reagent	-	2.0 + 3.0 + 5.0	10	±1.0	3, 5, 12, 13, 15, 18
Methylene blue	analogous EPA 425.1, APHA 5540 C, ASTM 2330-02, DIN EN 903, ISO 7875-1	5.0	-	±0.09	9, 11, 13, 18
Disulfine blue	analogous DIN 38409-20	0.5 + 5.0	-	±0.06	9, 11, 13, 18
TBPE	-	4.0	-	±0.26	9, 11, 13, 18
-	physical measurement	-	20	-	

Areas of application:	3 Beverages	7 Disinfection control	11 Environment	15 Mineral water
	4 Biotechnology, fermenter	8 Disposal drainage water	12 Food testing	16 Seawater
1 Agriculture	5 Boiler water, cooling water	9 Drinking water	13 Groundwater, surface water	17 Swimming pools
2 Aquaculture	6 Construction-material industry	10 Electroplating surface refinement	14 Milk dairy products	18 Wastewater

Spectroquant® Test Kits

Parameters T-Z

Parameter	Measuring range of the Spectroquant® instruments [mg/L]				Citation form	No. of tests	Ord. No.
	Prove 100/300/600	NOVA 30/60	Multy	Move 100			
T Tin Cell Test	0.10 – 2.50	0.10 – 2.50 •	0.10 – 2.50	0.10 – 2.50	Sn	25	1.14622.0001
TOC Cell Test	5.0 – 80.0	5.0 – 80.0	5.0 – 80.0	–	TOC	25	1.14878.0001
TOC Cell Test	50 – 800	50 – 800	50 – 800	–	TOC	25	1.14879.0001
Screw caps for Spectroquant® TOC digestion	–	–	–	–	–	6	1.73500.0001
TOC-Standard 1000 ±10 mg/L	–	–	–	–	–	100 mL	1.09017.0100
Total Alkalinity							
Total Hardness Cell Test	5 – 215	5 – 215	5 – 215	5 – 215	Ca	25	1.00961.0001
	0.7 – 30.1	0.7 – 30.1	0.7 – 30.1	0.7 – 30.1	°d		
	0.9 – 37.6	0.9 – 37.6	0.9 – 37.6	0.9 – 37.6	°e		
	1.2 – 53.7	1.2 – 53.7	1.2 – 53.7	1.2 – 53.7	°f		
	7 – 301	7 – 301	7 – 301	7 – 301	CaO		
	12 – 537	12 – 537	12 – 537	12 – 537	CaCO ₃		
Total Nitrogen							
Transmission	0.0 – 100.0 %	0.0 – 100.0 %	–	–	T	–	–
Turbidity	1 – 100	1 – 100 •	1 – 100	1 – 100	FAU	–	–
V Volatile Organic Acid Cell Test	50 – 3,000	50 – 3,000	50 – 3,000	50 – 3,000	acetic acid	25	1.01749.0001
	71 – 4,401	71 – 4,401	71 – 4,401	71 – 4,401	butyric acid		
Volatile Organic Acid Test ^{A)}	50 – 3,000	50 – 3,000	50 – 3,000	50 – 3,000	acetic acid	100	1.01809.0001
	71 – 4,401	71 – 4,401	71 – 4,401	71 – 4,401	butyric acid		
W Water Hardness							
Z Zinc Cell Test ^{C)}	0.025 – 1.000	0.025 – 1.000	25 – 1,000 µ/L	25 – 1,000 µ/L	Zn	25	1.00861.0001
Zinc Test ^{C)}	0.05 – 2.50	0.05 – 2.50 •	–	–	Zn	100	1.14832.0001
Zinc Reagent 6 (Isobutylmethylketone GR)	–	–	–	–	–	200	1.06146.1000
Zinc Cell Test ^{C)}	0.20 – 5.00	0.20 – 5.00	0.20 – 5.00	0.20 – 5.00	Zn	25	1.14566.0001



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www.sigma-aldrich.com

A. The cell test contains four 16 mm cells with a bar-code label. After measurement, the cells can be emptied and cleaned for subsequent measurements. | C. For determination of total content of this parameter, use one of the Crack Sets before the photometric procedure, see page 51. | • Only with NOVA 60



TOC TEST

Easily check total organic carbon with our TOC cell test

Method	Reference to norms and standards / Comments	Pipette volume [mL]	Cell size [mm] NOVA/Prove	Accuracy [mg/L]	Areas of application
Pyrocatechol violet	-	5.0	-	±0.08	5, 10, 16, 18
Indicator	Oxidation analogous APHA 5310 D	3.0 + 25	-	±3.6	9, 11, 13, 15, 18
Indicator	Oxidation analogous APHA 5310 D	1.0 + 3.0 + 9.0	-	±40	8, 11, 13, 18
-	for multiple use, additionally required for TOC measurement	-	-	-	
-	analogous EN 1484-H43, DIN 38409-H3 see Acid Capacity to pH 4.3	-	-	-	
Phthalein complexone	-	1.0	-	±8	2, 9, 13, 15
-	see Nitrogen (total)				
-	-	10, 20, 50	-	-	
-	analogous to EN ISO 7027	-	50	-	
Hydroxamic acids / iron(III) salt	-	0.5 + 5.0	-	±69	4, 8, 11, 18
Hydroxamic acids / iron(III) salt	-	0.75 + 0.5 + 5.0	-	±85	4, 8, 11, 18
-	see Total Hardness or Res. Hardness				
PAR	-	0.5 + 2.0 + 10	-	±0.033	1, 5, 9, 10, 11, 13, 15, 18
Cl-PAN	-	5.0	10	±0.07	5, 6, 8, 9, 10, 11, 15, 18
-	Extracting agent for Zinc Test 1.14832.0001	-	-	-	
PAR	-	0.5	-	±0.18	5, 6, 8, 9, 10, 11, 15, 18

Areas of application:

3 Beverages	7 Disinfection control	11 Environment	15 Mineral water
4 Biotechnology, fermenter	8 Disposal drainage water	12 Food testing	16 Seawater
1 Agriculture	9 Drinking water	13 Groundwater, surface water	17 Swimming pools
2 Aquaculture	10 Electroplating surface refinement	14 Milk dairy products	18 Wastewater
5 Boiler water, cooling water			
6 Construction-material industry			