

A watercolor palette with several wells of color including yellow, orange, red, pink, purple, green, and blue. A brush with a wooden handle is resting in the red well. The palette is on a white surface with some faint text visible.

# The many colours of quality.

Security in water analysis  
with the Spectroquant®  
analysis system

The test kits

The analysis instruments

Sample pretreatment

The quality guarantee

Quality assurance

The service

## Contents

<b>The test kits</b>	4
The cell test kits	6
The reagent test kits	7
All test kits at a glance	8
<b>The analysis instruments</b>	
The Spectroquant® Picco colorimeters	10
The Spectroquant® Multy colorimeter	12
The Spectroquant® NOVA photometers	14
<b>Sample pretreatment</b>	
The reagents for sample pretreatment	18
The thermoreactors	20
<b>The quality guarantee</b>	22
<b>Quality assurance</b>	24
The tools for quality assurance	26
<b>The service</b>	28
Merck worldwide	30



# The Spectroquant® analysis system

## Our quality claim for your safety.

Quality today plays a decisive role in water and wastewater analysis. After all, you must be able to rely on the measurement results.

Our comprehensive range of tools for quality assurance can ensure that your measurement values become safe, reproducible, and recognized analytical results.

For us quality starts right at the beginning, with the production. Strict controls ensure a consistently high quality. Guaranteed. And, if you wish, you can have this in writing, too: lot certificate, quality certificate, test seal, and validation of the method of analysis all vouch for our claim.

And, to enable you to check our quality wherever and whenever you wish, we also offer a comprehensive range of special equipment. With our PhotoCheck, CombiCheck, and PipeCheck product ranges, the ready-to-use standard solutions, or the thermosensor, you're able to check the quality of our media as well as your own working procedures from start to finish. Only by ensuring the security of the overall system is it possible to guarantee the accuracy of your analytical results.

As you can see, only when every aspect closely meshes with the others and every component meets up to the stringent quality claim can the overall system be said to be secure and accurate.



# The test kits Simply comprehensive.

No matter whether drinking water, surface water, process water, municipal or industrial wastewater, water run-offs from waste dumps, waste, or soil is involved – over 130 different Spectroquant® test kits and numerous applications are available as competent solutions all provided by one supplier. The scope of parameters is finely tuned to the requirements of everyday practice and is constantly extended further still.

Ease of use, excellent descriptions of the working steps, and thus safe in their application – these are the characteristic features of the Spectroquant® test kits. We've even taken care of the calibration for you: all test kits are pre-programmed in the photometers.

## Validation gives you that sense of security

All Spectroquant® analysis methods are validated, which means that the quality is defined and secured. Validation data have been determined for each individual Spectroquant® test kit and are documented in the validation certificate.

Many Spectroquant® analytical methods conform with the relevant standards and are thus comparable. This gives you additional security.



## Sum parameters

such as COD are conventional parameters. The chemistry contained in Spectroquant® products conforms with the relevant standards and bears the “USEPA Approved” seal of quality issued by the US Environmental Protection Agency. The division into seven different measuring ranges for COD enables you to obtain accurate results without having to dilute your samples.

## Nutrients

such as nitrogen and phosphorus play an essential role in all types of water. The sample-preparation procedure necessary to determine the total concentrations is already integrated in the Spectroquant® cell test.

## Hazardous substances

such as cadmium, lead, chromate, and cyanide must be determinable even in the smallest trace quantities – another task readily accomplished by the Spectroquant® test kits.

## Heavy metals

must be detected in the wastewater emanating from electroplating and textile-processing facilities. The correct sample pretreatment plays an essential role here. Spectroquant® crack sets can break up even the most demanding samples for analysis.

## Anions

such as nitrate, nitrite, chloride, fluoride, and sulfate are of relevance not just in the area of drinking water processing. A practically oriented selection of Spectroquant® test kits makes sure that all requirements are taken care of.

Principle of the chemical reaction:

Reagent (cuprizone) + Sample/analyte (Cu ion)



= blue dye, which is then measured in the photometer



# The cell test kits

## Simply user-friendly.

Spectroquant® cell tests are characterized by their high degree of user-friendliness. Virtually all of the reagents required for the analysis are already contained in the cell. The bar code printed on each cell makes it unmistakable, and when the cell is inserted into the photometer the correct method is automatically selected, thus avoiding the risk of mix-ups.

### Packaging

The packaging provides an ideal protection of the cells during transport and against variations in temperature and humidity. The label on the outside gives important details on the contents and safety, risk phrases in symbol form and in writing, the batch number, and the shelf-life of the test kit (up to three years) at a glance.

### Package insert

All the information of relevance for you – for instance the reaction principle, exact operating instructions, area of application, the influence of foreign ions, and data on the accuracy – are presented in an easily surveyable form in the package insert.

### Cell label

Parameters and item numbers, risk phrases and contents, and the most important thing of all, the bar code – that's a lot of information given in a very small space.

### Additional reagents

Other reagents required for the determination or for the sample preparation are included packed in easy-to-handle metering bottles.

*The reaction cells are made of special high-quality glass with excellent optical properties.*



# The reagent test kits

## Simply inexpensive.

Spectroquant® reagent tests contain highly stable, ready-to-use reagent mixtures packaged in a user-friendly way. The ability to select the cell format makes the measurement range highly variable. The linearity of the calibration function is tested for each individual cell format. The AutoSelector contained in each package bears a bar code that ensures that the correct method is selected in the photometer. In many cases, thanks to the use of 50-mm cells the limit of detection is shifted right down to the ppb range.

Spectroquant® test kits can be used in every spectrophotometer and also in photometers from other suppliers.

### Reagents

The reagents themselves are either liquid or solid and are added to the sample by means of a dropper, pipette, or metering spoon. An extremely long shelf-life (up to three years) and the avoidance of the need to store the kits under refrigeration are further advantages.

*The package contains all the necessary reagents. The operating procedure is described in detail in the package insert.*



# All test kits at a glance

The Spectroquant® test kits, Bioquant® test kits, applications, and physical methods listed below can be used in conjunction with the Spectroquant® NOVA 30, NOVA 60 und NOVA 400 photometers, the Spectroquant® Multy colorimeter, and standard spectrophotometers.

Cat. No.	Parameter	No. of deter- minations per pack	Measuring range for NOVA 60, NOVA 400, spectrophotometers in mg/l	Suitable for use with NOVA 30	Measuring range for the Multy colorimeter in mg/l
	Absorbance		0.001 – 3.000 A	•	– 2.500 – 2500 A
1.01762.0001	Acid Capacity Cell Test to pH 4.3 (total alkalinity)	90	0.20 – 8.00 mmol/l	•	0.20 – 8.00 mmol/l
1.14965.0001	Alcohol Cell Test	25	0.40 – 5.00 g/l Alc	•	–
1.14825.0001	Aluminium Test	350*	0.020 – 1.20 Al	•	20 – 700 µg/l Al
1.14739.0001	Ammonium Cell Test	25	0.010 – 2.000 NH <sub>4</sub> -N	•	10 – 2000 µg/l NH <sub>4</sub> -N
1.14558.0001	Ammonium Cell Test	25	0.20 – 8.00 NH <sub>4</sub> -N	•	0.20 – 8.00 NH <sub>4</sub> -N
1.14544.0001	Ammonium Cell Test	25	0.5 – 16.0 NH <sub>4</sub> -N	•	–
1.14559.0001	Ammonium Cell Test	25	4.0 – 80.0 NH <sub>4</sub> -N	•	4.0 – 80.0 NH <sub>4</sub> -N
1.14752.0001	Ammonium Test	500*	0.010 – 3.00 NH <sub>4</sub> -N	•	0.02 – 1.30 NH <sub>4</sub> -N
1.00683.0001	Ammonium Test	100	2.0 – 150 NH <sub>4</sub> -N	•	1.0 – 50.0 NH <sub>4</sub> -N
	Antimony		0.10 – 8.00 Sb	•	–
1.00675.0001	AOX Cell Test	25	0.05 – 2.50 AOX	•	0.05 – 2.50 AOX
1.01747.0001	Arsenic Test	30	0.001 – 0.100 As	•	5 – 100 µg/l As
1.00687.0001	BOD Cell Test	50	0.5 – 3000 BOD	•	0.5 – 3000 BOD
1.00826.0001	Boron Cell Test	25	0.05 – 2.00 B	•	0.05 – 2.00 B
1.14839.0001	Boron Test	60	0.050 – 0.800 B	•	–
1.00605.0001	Bromine Test	200	0.020 – 10.00 Br <sub>2</sub>	•	0.10 – 5.00 Br <sub>2</sub>
1.14834.0001	Cadmium Cell Test	25	0.025 – 1.000 Cd	•	25 – 1000 µg/l Cd
1.01745.0001	Cadmium Test	55	0.002 – 0.500 Cd	•	5 – 500 µg/l Cd
1.00858.0001	Calcium Cell Test	25	10 – 250 Ca	•	10 – 250 Ca
1.14815.0001	Calcium Test	100	5 – 160 Ca 1.0 – 15.0 Ca	•	5 – 160 Ca
1.14730.0001	Chloride Cell Test	25	5 – 125 Cl	•	5 – 125 Cl
1.14897.0001	Chloride Test	100	2.5 – 250 Cl	•	10 – 250 Cl
1.00595.0001	Chlorine Cell Test (free chlorine)	• 200	0.03 – 6.00 Cl <sub>2</sub>	•	0.05 – 5.00 Cl <sub>2</sub>
1.00598.0002	Chlorine Test (free chlorine)	• 200	0.010 – 6.00 Cl <sub>2</sub>	•	0.02 – 3.00 Cl <sub>2</sub>
1.00598.0001	Chlorine Test (free chlorine)	• 1200	0.010 – 6.00 Cl <sub>2</sub>	•	0.02 – 3.00 Cl <sub>2</sub>
1.00602.0001	Chlorine Test (total chlorine)	• 200	0.010 – 6.00 Cl <sub>2</sub>	•	0.02 – 3.00 Cl <sub>2</sub>
1.00602.0002	Chlorine Test (total chlorine)	• 1200	0.010 – 6.00 Cl <sub>2</sub>	•	0.02 – 3.00 Cl <sub>2</sub>
1.00597.0001	Chlorine Cell Test (free and total chlorine)	• 200	0.03 – 6.00 Cl <sub>2</sub>	•	0.05 – 5.00 Cl <sub>2</sub>
1.00599.0001	Chlorine Test (free and total chlorine)	• 200	0.010 – 6.00 Cl <sub>2</sub>	•	0.02 – 3.00 Cl <sub>2</sub>
1.00608.0001	Chlorine Dioxide Test	200	0.020 – 10.00 ClO <sub>2</sub>	•	0.10 – 5.00 ClO <sub>2</sub>
1.14552.0001	Chromate Cell Test (total chromium)	• 25	0.05 – 2.00 Cr	•	0.05 – 2.00 Cr
1.14758.0001	Chromate Test	250*	0.010 – 3.00 Cr	•	10 – 1400 µg/l Cr
	Chromium in electroplating baths		4 – 400 g/l CrO <sub>3</sub>	•	–
1.14560.0001	COD Cell Test	•• 25	4.0 – 40.0 COD	•	–
1.14540.0001	COD Cell Test	•• 25	10 – 150 COD	•	10 – 150 COD
1.14895.0001	COD Cell Test	•• 25	15 – 300 COD	•	15 – 300 COD
1.14690.0001	COD Cell Test	•• 25	50 – 500 COD	•	50 – 500 COD
1.14541.0001	COD Cell Test	•• 25	25 – 1500 COD	•	25 – 1500 COD
1.14691.0001	COD Cell Test	•• 25	300 – 3500 COD	•	300 – 3500 COD
1.14555.0001	COD Cell Test	•• 25	500 – 10000 COD	•	0.50 – 10.00 g/l COD
1.09772.0001	COD Cell Test (Hg-free)	•• 25	10 – 150 COD	•	–
1.09773.0001	COD Cell Test (Hg-free)	•• 25	100 – 1500 COD	•	–
	Colour, true and apparent (Pt-Co/APHA/Hazen)		1 – 1000	•	0 – 1000
	Colour measurement		0.5 – 50.0 m <sup>-1</sup>	•	–
1.14553.0001	Copper Cell Test	25	0.05 – 8.00 Cu	•	0.05 – 8.00 Cu
1.14767.0001	Copper Test	250	0.02 – 6.00 Cu	•	0.10 – 6.00 Cu
	Copper in electroplating baths		2.0 – 80.0 g/l Cu	•	–
1.14561.0001	Cyanide Cell Test for the determination of free and readily liberated cyanide	• 25	0.010 – 0.500 CN	•	10 – 350 µg/l CN
1.09701.0001	Cyanide Test for the determination of free and readily liberated cyanide	100*	0.002 – 0.500 CN	•	5 – 200 µg/l CN
1.14557.0001	Fluoride Cell Test	25	0.10 – 1.50 F 0.025 – 0.500 F	•	0.10 – 1.50 F
1.14598.0001	Fluoride Test	100	0.10 – 20.0 F	•	0.10 – 2.00 F
1.14500.0001	Formaldehyde Cell Test	25	0.10 – 8.00 HCHO	•	–
1.14678.0001	Formaldehyde Test	100	0.02 – 8.00 HCHO	•	–
1.14821.0001	Gold Test	80	0.5 – 12.0 Au	•	–
	Hazen Colour number (Pt-Co/APHA)		0 – 1000 HZ	•	0 – 1000
1.09711.0001	Hydrazine Test	100*	0.005 – 2.00 N <sub>2</sub> H <sub>4</sub>	•	10 – 1200 µg/l N <sub>2</sub> H <sub>4</sub>
1.14731.0001	Hydrogen Peroxide Cell Test	25	2.0 – 20.0 H <sub>2</sub> O <sub>2</sub> 0.25 – 5.00 H <sub>2</sub> O <sub>2</sub>	•	–
	Iodine Colour number		0.010 – 50.0 IFZ	•	–
1.00606.0001	Iodine Test	200	0.05 – 10.00 I <sub>2</sub>	•	0.10 – 5.00 I <sub>2</sub>
1.14549.0001	Iron Cell Test	25	0.05 – 4.00 Fe	•	0.05 – 4.00 Fe
1.14896.0001	Iron Cell Test	25	1.0 – 50.0 Fe	•	–
1.14761.0002	Iron Test	250*	0.005 – 5.00 Fe	•	0.01 – 2.00 Fe
1.14761.0001	Iron Test	1000*	0.005 – 5.00 Fe	•	0.01 – 2.00 Fe
1.00796.0001	Iron Test	150	0.010 – 5.00 Fe	•	0.10 – 5.00 Fe
1.14833.0001	Lead Cell Test	25	0.10 – 5.00 Pb	•	0.10 – 5.00 Pb
1.09717.0001	Lead Test	50	0.010 – 5.00 Pb	•	0.05 – 5.00 Pb

- This method is USEPA-approved, i.e. this method is recognized as an alternative method.
- The listed COD cell tests conform entirely with DIN ISO 15705.
- For technical reasons the number of determinations for the Multy colorimeter is lower.

Cat. No.	Parameter	No. of determinations per pack	Measuring range for NOVA 60, NOVA 400, spectrophotometers in mg/l	Suitable for use with NOVA 30	Measuring range for the Multy colorimeter in mg/l
1.00815.0001	Magnesium Cell Test	25	5.0 – 75.0 Mg	•	5.0 – 75.0 Mg
1.00816.0001	Manganese Cell Test	25	0.10 – 5.00 Mn		0.10 – 5.00 Mn
1.01739.0001	Manganese Test	250	0.005 – 2.00 Mn	•	0.05 – 1.80 Mn
1.14770.0001	Manganese Test	500*	0.010 – 10.00 Mn		0.05 – 6.00 Mn
	Mercury		0.025 – 1.000 Hg		–
1.00860.0001	Molybdenum Cell Test	25	0.02 – 1.00 Mo		0.02 – 1.00 Mo
1.01632.0001	Monochloramine Test	150	0.050 – 10.00 Cl <sub>2</sub>		0.10 – 5.00 Cl <sub>2</sub>
1.14554.0001	Nickel Cell Test	25	0.10 – 6.00 Ni	•	0.10 – 6.00 Ni
1.14785.0001	Nickel Test	250*	0.02 – 5.00 Ni		0.05 – 5.00 Ni
	Nickel in electroplating baths		2.0 – 120 g/l Ni	•	–
1.14542.0001	Nitrate Cell Test	25	0.5 – 18.0 NO <sub>3</sub> -N	•	0.5 – 15.0 NO <sub>3</sub> -N
1.14563.0001	Nitrate Cell Test (DMP)	25	0.5 – 25.0 NO <sub>3</sub> -N	•	–
1.14764.0001	Nitrate Cell Test (DMP)	25	1.0 – 50.0 NO <sub>3</sub> -N	•	–
1.00614.0001	Nitrate Cell Test (DMP)	25	23 – 225 NO <sub>3</sub> -N	•	–
1.14773.0001	Nitrate Test	100	0.20 – 20.0 NO <sub>3</sub> -N		0.5 – 15.0 NO <sub>3</sub> -N
1.09713.0001	Nitrate Test (DMP)	100	0.10 – 25.0 NO <sub>3</sub> -N		–
1.14556.0001	Nitrate Cell Test in Seawater	25	0.10 – 3.00 NO <sub>3</sub> -N		–
1.14942.0001	Nitrate Test in Seawater	50	0.2 – 17.0 NO <sub>3</sub> -N		–
1.14547.0001	Nitrite Cell Test	25	0.010 – 0.700 NO <sub>2</sub> -N	•	10 – 700 µg/l NO <sub>2</sub> -N
1.14776.0002	Nitrite Test	335*	0.002 – 1.00 NO <sub>2</sub> -N		5 – 400 µg/l NO <sub>2</sub> -N
1.14776.0001	Nitrite Test	1000*	0.002 – 1.00 NO <sub>2</sub> -N		5 – 400 µg/l NO <sub>2</sub> -N
1.00613.0001	Nitrogen (total) Cell Test	25	0.5 – 15.0 N	•	–
1.14537.0001	Nitrogen (total) Cell Test	25	0.5 – 15.0 N	•	0.5 – 15.0 N
1.14763.0001	Nitrogen (total) Cell Test	25	10 – 150 N	•	–
1.14694.0001	Oxygen (dissolved) Cell Test	25	0.5 – 12.0 O <sub>2</sub>	•	–
1.00607.0001	Ozone Test	200	0.010 – 4.00 O <sub>3</sub>		0.02 – 2.00 O <sub>3</sub>
1.00607.0002	Ozone Test	1200	0.010 – 4.00 O <sub>3</sub>		0.02 – 2.00 O <sub>3</sub>
	Palladium		0.05 – 1.25 Pd		–
1.01744.0001	pH Cell Test	280	pH 6.4 – 8.8	•	pH 6.4 – 8.8
1.14551.0001	Phenol Cell Test	25	0.10 – 2.50 Phenol 0.025 – 1.000 Phenol		0.10 – 2.50 Phenol
1.00856.0001	Phenol Test	50 – 250	0.002 – 0.100 Phenol 0.025 – 5.00 Phenol		0.10 – 5.00 Phenol
1.14543.0001	Phosphate Cell Test (PMB) (total P)	• 25	0.05 – 5.00 PO <sub>4</sub> -P	•	0.05 – 4.00 PO <sub>4</sub> -P
1.14729.0001	Phosphate Cell Test (PMB) (total P)	• 25	0.5 – 25.0 PO <sub>4</sub> -P	•	0.5 – 20.0 PO <sub>4</sub> -P
1.00616.0001	Phosphate Cell Test (PMB)	25	3.0 – 100.0 PO <sub>4</sub> -P	•	3.0 – 100.0 PO <sub>4</sub> -P
1.14848.0001	Phosphate Test (PMB)	420*	0.010 – 5.00 PO <sub>4</sub> -P		0.01 – 2.50 PO <sub>4</sub> -P
1.00798.0001	Phosphate Test (PMB)	100	1.0 – 100.0 PO <sub>4</sub> -P		1.0 – 60.0 PO <sub>4</sub> -P
1.14546.0001	Phosphate Cell Test (VM)	25	0.5 – 25.0 PO <sub>4</sub> -P	•	–
1.14842.0001	Phosphate Test (VM)	400	0.5 – 30.0 PO <sub>4</sub> -P		–
	Platin		0.10 – 1.25 Pt		–
1.14562.0001	Potassium Cell Test	25	5.0 – 50.0 K	•	5.0 – 50.0 K
1.00615.0001	Potassium Cell Test	25	30 – 300 K	•	30 – 300 K
1.10306.0500	Protein Test (Bioquant®)	200	0.01 – 1.4 g/l protein		–
1.10307.0500	Protein Test (Bioquant®)	250	0.5 – 10 g/l protein		–
1.14683.0001	Residual Hardness Cell Test	25	0.50 – 5.00 Ca	•	0.50 – 5.00 Ca
1.14831.0001	Silver Test	100	0.25 – 3.00 Ag		–
1.14794.0001	Silicate (Silicic Acid) Test	300*	0.005 – 5.00 Si		0.05 – 4.00 Si
1.00857.0001	Silicate (Silicic Acid) Test	100	0.5 – 500 Si		5 – 500 Si
1.00885.0001	Sodium Cell Test in nutrient solutions for fertilization	25	10 – 300 Na	•	10 – 300 Na
1.14548.0001	Sulfate Cell Test	• 25	5 – 250 SO <sub>4</sub>	•	5 – 250 SO <sub>4</sub>
1.00617.0001	Sulfate Cell Test	25	50 – 500 SO <sub>4</sub>	•	50 – 500 SO <sub>4</sub>
1.14564.0001	Sulfate Cell Test	• 25	100 – 1000 SO <sub>4</sub>	•	100 – 1000 SO <sub>4</sub>
1.14791.0001	Sulfate Test	180	25 – 300 SO <sub>4</sub>		–
1.14779.0001	Sulfide Test	420	0.020 – 1.50 S		0.10 – 1.50 S
1.14394.0001	Sulfite Cell Test	25	1.0 – 20.0 SO <sub>3</sub> 0.05 – 3.00 SO <sub>3</sub>		1.0 – 20.0 SO <sub>3</sub>
1.01746.0001	Sulfite Test	150	1.0 – 60.0 SO <sub>3</sub>		1.0 – 60.0 SO <sub>3</sub>
1.14697.0001	Surfactants (anionic) Cell Test	25	0.05 – 2.00 MBAS		0.05 – 2.00 MBAS
1.01764.0001	Surfactants (cationic) Cell Test	25	0.05 – 1.50 CTAB		0.05 – 1.50 CTAB
1.01787.0001	Surfactants (nonionic) Cell Test	25	0.10 – 7.50 Triton X-100	•	0.10 – 7.50 Triton X-100
	Suspended solids		25 – 750 suspended solids	•	50 – 750 suspended solids
1.14622.0001	Tin Cell Test	25	0.10 – 2.50 Sn		0.10 – 2.50 Sn
1.14878.0001	TOC Cell Test	25	5.0 – 80.0 TOC	•	5.0 – 80.0 TOC
1.14879.0001	TOC Cell Test	25	50 – 800 TOC	•	50 – 800 TOC
1.00961.0001	Total Hardness Cell Test	25	5 – 215 Ca	•	5 – 215 Ca
	Transmission		0.0 – 100.0 %T	•	–
	Turbidity		1 – 100 FAU		1 – 100 FAU
1.01763.0001	Volatile Organic Acids Cell Test	100	50 – 3000	•	50 – 3000
1.00861.0001	Zinc Cell Test	25	0.025 – 1.000 Zn	•	25 – 1000 µg/l Zn
1.14566.0001	Zinc Cell Test	25	0.20 – 5.00 Zn	•	0.20 – 5.00 Zn
1.14832.0001	Zinc Test	90	0.05 – 2.50 Zn		–

# The Spectroquant® Picco colorimeters Simply compact.

Spectroquant® Picco colorimeters are the ideal systems for performing simple drinking-water and wastewater analysis. When it's only one or two parameters that need to be determined, the corresponding Picco colorimeter is the compact solution for the user.

When it comes to ease of use, the Piccos and the corresponding test kits are in a class of their own. The user can select between the easy-to-handle cell tests or the inexpensive reagent tests. Each working step is described in detail and the tests can be performed even by untrained persons, anytime and anywhere.

*The Spectroquant® Picco colorimeters offer a simple solution for the rapid determination of standard parameters.*



## Ordering information

Cat. No.	Product name
1.73600.0001	Spectroquant® Colorimeter Picco Cl <sub>2</sub> / pH / O <sub>3</sub>
1.73601.0001	Spectroquant® Colorimeter Picco COD / CSB
1.73602.0001	Spectroquant® Colorimeter Picco NH <sub>4</sub> -N
1.73603.0001	Spectroquant® Colorimeter Picco NO <sub>3</sub> -N
1.73604.0001	Spectroquant® Colorimeter Picco N
1.73605.0001	Spectroquant® Colorimeter Picco PO <sub>4</sub> -P

The Piccos are available for various parameters. Thanks to their being preprogrammed with Spectroquant® test kits they feature the broadest range of differing measuring ranges and thus offer the best solution for each application.

## Cl<sub>2</sub> / pH / O<sub>3</sub>

### Chlorine, pH, and ozone

The three basic parameters for water quality can now be monitored with just one compact instrument: chlorine from a concentration of 0.02 mg/L up, the pH between values of 6.4 and 8.8, and ozone concentrations between 0.02 and 3.40 mg/L.

## COD / CSB

### Chemical oxygen demand

The right choice every time: You use three optimally selected measuring ranges to determine the chemical oxygen demand, thus covering all areas of basic waterwater analysis. After preparing for the test (boiling time and cooling) all you have to do is run the measurement in the Spectroquant® Picco colorimeter.

## NH<sub>4</sub>-N

### Ammonium

No matter whether you're dealing with low values in drinking water (from 0.20 mg/L NH<sub>4</sub>-N) or high concentrations (up to 100 mg/L NH<sub>4</sub>-N) in wastewater: the Picco will give you the exact concentration of ammonium in your sample.

## NO<sub>3</sub>-N

### Nitrate

The detection with the 2,6-dimethylphenol method is the far more environmentally friendly alternative to the cadmium-reduction method. Four different tests enable you to cover all the measuring ranges from 1.0 to 225 mg/L NO<sub>3</sub>-N.

## N

### Nitrogen

Unique: Picco N, the compact instrument for the determination of total nitrogen. With just two cell tests you can monitor nitrogen concentrations in measuring ranges from 1.0 up to 150 mg/L N.

## PO<sub>4</sub>-P

### Phosphate

The test kits and measuring ranges have been selected in such a way to enable you to measure low values in drinking water as well as higher values in wastewater samples. With the Spectroquant® Colorimeter Picco PO<sub>4</sub>-P you can determine the concentrations of ortho-phosphate and total phosphorus swiftly and simply.



# The Spectroquant® Multy colorimeter Simply the all-rounder.

The new Spectroquant® Multy colorimeter is the ideal option for all users who are looking for an inexpensive and all-round solution for photometric water analysis. The easy-to-operate and robust instrument is particularly suited for on-the-spot use.

The Spectroquant® Multy colorimeter is programmed for the use of over 90 Spectroquant® reagent and cell tests and covers all important parameters in the area of drinking-water and wastewater analysis, e.g. COD, total nitrogen, total phosphorus, and many more besides. It is also capable of measuring traces of e.g. cyanide, arsenic and cadmium with high precision. The broad range of easy-to-handle Spectroquant® test kits offers an optimal solution for every user.

Analytical Quality Assurance (AQA) for monitoring the overall system and to secure your results can be done using the proven Spectroquant® CombiCheck solutions (multiparameter standard solutions). These standards are prediluted ready-for-use and are directly traceable to NIST standards.

*The Spectroquant® Multy colorimeter enables most parameters to be flexibly and easily determined.*

## Ordering information

Cat. No.	Product name
1.73630.0001	Spectroquant® Multy colorimeter



## Robust construction

The Spectroquant® Multy colorimeter features an ergonomically designed and acid-resistant keyboard as well as a large-format graphics display. Temperature-compensated LEDs with interference filters and an internal reference channel (two-beam technology) supply results with the highest conceivable accuracy at six different wavelengths (430 nm, 530 nm, 560 nm, 580 nm, 610 nm, and 660 nm). The uniquely designed optics system permits the automatic selection of the required wavelength without any moveable parts whatsoever being involved.

The power is supplied in the form of easy-to-exchange standard rechargeable batteries or the universal mains adapter. Thanks to the intelligent recharging control feature that is integrated in the instrument, it's possible to recharge the batteries while the unit is feeding off the mains supply without having to remove them. Alternatively the instrument can also be operated without the mains adapter using alkaline manganese batteries. This makes the SQ Multy colorimeter optimally suited for each and every kind of use, no matter whether on the laboratory workbench or directly on-site.

## Watertight quality

The entire instrument, the measurement compartment, and the battery compartment are entirely watertight and thus prevent any water from coming into contact with the electronic components.

## Simple to use

The Spectroquant® Multy colorimeter can store up to 1,000 separate measurement results including the date, the time, and the data-set number, information that can be easily transmitted to a PC or printer via the integrated RS232 interface.

The device comes in a practical carrycase and is completely supplied with seven conventional rechargeable batteries, mains adapter, integrated recharging unit, three 16-mm and three 24-mm round cells, cell adapter, and a data-transmission cable for linking the instrument to a PC or printer.



*Six round cells (three 16 mm and three 24 mm) are supplied with the instrument.*

# The Spectroquant® NOVA photometers Simply state-of-the-art.

Different requirements demand different solutions. The Spectroquant® NOVA photometers are practically oriented - there is a fitting instrument for each area of application. One thing they all have in common is the high quality of the measurement results, coupled with ease of use and start-to-finish Analytical Quality Assurance features – made possible by innovative instrument technology.

## Optics

The heart of the photometers, the optical system, is robust and without any mechanical wear and tear, since it does not contain any moveable components. State-of-the-art electronics support the optical system. In the Spectroquant® NOVA 30A and NOVA 60 photometers six and, respectively, twelve narrow-band interference filters and photodiodes in array arrangement deal with the measurement tasks. The optical module together with the photodiode array – these are the characteristic features of the Spectroquant® NOVA 400 photometer.

## Rechargeable powerpack for mobile use

With the rechargeable powerpack-operated Spectroquant® NOVA 30A and NOVA 60A photometers, up to 500 measurements can be made in one week in the powerpack mode.

## Method update

New methods can be swiftly and effortlessly downloaded into the instruments by means of the method-update software. The software can be downloaded free of charge at <http://photometry.merck.de> and transferred from the PC to the photometer via the serial data-transfer cable. Your photometer saves the new data automatically and reliably. Job done.

## Bar-code identification

A unique bar code gives each test kit an unmistakable identity. When the cell is inserted or the AutoSelector function is activated (when analyzing with a reagent test), the photometer scans the bar code. The instrument automatically identifies the method in question, accesses the necessary stored data, and within a matter of minutes displays the measurement result in the desired data format. Manual settings are no longer required.



*Automatic method selection by means of the bar code on the cells or by the Autoselector function, an integral component of every reagent test kit.*

## Quality assurance

Analytical Quality Assurance (AQA) is an absolute “must” in water analysis. Already today we have faced up to this challenge in a future-oriented way. The Spectroquant® photometers give you the support you need for comprehensive AQA. The GLP-compliant documentation of your measurement results is thus guaranteed.

## Turbidity correction

Turbid measurement solutions give rise to errors. Turbidity measurements are relatively independent of the wavelength being employed. Since the diode-array technology permits simultaneous measurements at various wavelengths, any turbidity is recognized and automatically considered in the final measurement.

## Automatic cell identification

A special feature of the Spectroquant® NOVA 60 and NOVA 400 photometers is their ability to automatically identify rectangular cells. The photometer recognizes the optical path length of the cell being used and immediately calculates the correct concentration. Any risk of error due to the wrong cell being selected is thus excluded.

## Documentation

The Spectroquant® photometers feature high-performance result-memory slots capable of automatically saving up to 1,000 data sets permanently. The results are automatically recorded along with the date and time of measurement. The integrated Multi-Achat II software ensures that measurement results can be effortlessly transferred from the photometer to the PC, where they can be saved and processed e.g. in an Excel format. Statistical evaluations and the graphic presentation of the measurement data are thus made child's play. This gives you the necessary data integrity in the sense of DIN EN ISO 9001.



*10-mm, 20-mm, or 50-mm rectangular cells are automatically identified by the NOVA 60 und NOVA 400 photometers.*



# The NOVA photometers at a glance

## Simply versatile.

### Spectroquant® NOVA 30 A the easy-to-handle photometer for new users

The Spectroquant® NOVA 30 A photometer is compact, robust, and - wherever necessary - also mobile. All important cell tests for water and wastewater analysis can be measured with this instrument. The data for about 60 different test kits are already programmed permanently. Even the basic model, the Spectroquant® NOVA 30 A, naturally also features the bar-code scanning system that makes measurements so easy and secure. It goes without saying that AQA support and documentation are also integral features of the Spectroquant® NOVA 30 A.

### Spectroquant® NOVA 60 the easy-to-handle and flexible photo- meter for the daily routine

The Spectroquant® NOVA 60 is compact and ready for mobile use when needed. Not only all the cell tests, also the Spectroquant® reagent tests are permanently stored. The instrument automatically recognizes the cell being used and calculates the concentration from the measured absorbance value in a matter of seconds. More than 130 test kits with various measuring ranges and practical reference forms make the NOVA 60 a photometer with a universal spectrum of applications. Three AQA modes are available to enhance your data integrity, and you can even programme and save your 50 most frequently used photometric methods yourself.

**New** The proven NOVA 30 A and NOVA 60 photometers have been redesigned and improved to make them even more user-friendly and easy to handle.

The following features have been added:

- Analytical Quality Assurance (AQA):  
Optional parameter-specific definition of measurement cycles.
- The user's own blank values can be saved permanently to facilitate user-specific determinations.
- Increase in the number of freely programmable methods in the NOVA 60 from 10 to 50.
- Integrated transmission measurement.
- 16 different languages can be selected.

#### Ordering information

Cat. No.	Product name
1.09748.0001	Spectroquant® NOVA 30 A
1.09751.0001	Spectroquant® NOVA 60
1.09752.0001	Spectroquant® NOVA 60 A
1.09777.0001	Spectroquant® NOVA 400
1.09759.0001	Printer cable
1.14964.0001	Software Multi-Achat II
1.14667.0001	PC cable für photometers



**Spectroquant® NOVA 400**  
the easy-to-handle and universal photometer,  
even for individual solutions

The integrated bar-code and automatic cell-identification features make measurement with the Spectroquant® NOVA 400 a simple and easy-to-handle matter. All data on every available test kit are permanently saved in the photometer's memory base. But the NOVA 400 can do more than just this - in contrast to the two other instruments that make up the NOVA range, it's a spectrophotometer capable of measuring at any

desired wavelength between 350 and 850 nm, meaning that it can also be used for reference analysis (DIN, EN ISO, EPA). What's more, the photometer can also permanently save up to 99 user-specific methods. Absorbance spectra can be recorded and absorbance maxima determined in a matter of seconds. Easy-to-handle tools are available for kinetic tests and for colorimetric and turbidimetric investigations.



# Sample pretreatment

## Simply effective.

Sample pretreatment is an integral component of the Spectroquant® analysis system. Some test kits already contain all the reagents needed for the sample-pretreatment process. For a multitude of other analytical tasks we offer Spectroquant® Crack Sets for the simple and at the same time effective pretreatment of sample materials. The thermoreactors enable samples to be effortlessly digested for further analysis.

*The reagents contained in the package and the analysis instructions accessible at <http://photometry.merck.de> make sample digestion child's play.*

### Reagents for sample pretreatment included in the test kit

These reagent sets make the determination of COD, TOC, AOX, total nitrogen, total phosphorus, total chromium, and silver an easy affair. All the required reagents – even those needed for the digestion – are included in the respective test kits. The illustrated instructions for use guide you safely on your way to correct results.



# The reagents for sample pretreatment

## Simply correct.

### Crack sets

It's not always the case that the total content of all elements have to be determined. To enhance the flexibility of the procedures and to avoid having to include unnecessary chemicals in the test kit, the reagents required for sample pretreatment are available as separately packaged products. This enables you to solve your analytical tasks according to your individual needs.

#### Crack Set 10

Digestion reagents for the determination of the total content of cadmium, chromium, copper, iron, lead, nickel, phosphorus, and zinc for use in the thermoreactor.

#### Crack Set 10C

The "C" stands for cells, i.e. the cells required for the digestion in the thermoreactor are contained in the set. The cells already contain the respective digestion reagent in the required metered amounts. The area of application is the same as that for Crack Set 10 above.

#### Crack Set 20

Reagents for the digestion of total nitrogen for use in the thermoreactor.

#### Ordering information

Cat. No.	Product name
1.14687.0001	Spectroquant® Crack Set 10
1.14688.0001	Spectroquant® Crack Set 10C
1.14963.0001	Spectroquant® Crack Set 20



*When it comes to analyzing the total content of specific parameters, the Crack Sets contain the necessary reagents.*

# The thermoreactors

## Simply comfortable.

### The TR 320 thermoreactor

Simple to use thanks to five standard digestion programmes saved in the instrument, capable of digesting twelve samples simultaneously – that's the TR 320.

The TR 320 thermoreactor offers everything that's necessary for a simple and correct digestion procedure.

### The TR 420 thermoreactor

Flexible in its use by the free selectability of temperature and time settings, besides five standard digestion programmes for the simultaneous digestion of up to 24 samples, and reproducibly secure results thanks to the AQA function – that's the TR 420.

The TR 420 thermoreactor is already programmed with the digestion routines required for wastewater analysis, but can also be used individually in the temperature range up to 170°C and with digestion times of up to three hours.

### The TR 620 thermoreactor

The “two-in-one” professional instrument with all the advanced features of the TR 420, but with two separate heating blocks individually programmable for temperature and time – that's the TR 620.

The TR 620 thermoreactor has two separately controllable heating blocks that enable the user to run two different digestion programmes simultaneously. This enables e.g. twelve COD and twelve TOC samples to all be digested within just 120 minutes.



*The standard digestion programme is already stored in the thermoreactors. The TR 420 is even capable of digesting up to 24 samples simultaneously.*

## Standard digestion programmes

Standard programmes for routine digestions help prevent operating errors. The Spectroquant® thermoreactor family features five standard programmes for day-to-day routine processes:

- 148°C, 120 min for COD
- 120°C, 120 min for TOC
- 120°C, 60 min for total nitrogen, total content of Cr, Cu, Ni, Pb, Cd, Fe, and Zn
- 120°C, 30 min for AOX and total phosphorus, cyanide
- 100°C, 60 min for Ag

### Ordering information

Cat. No.	Product name
1.71200.0001	Spectroquant® Thermoreactor TR 320
1.71201.0001	Spectroquant® Thermoreactor TR 420
1.71202.0001	Spectroquant® Thermoreactor TR 620

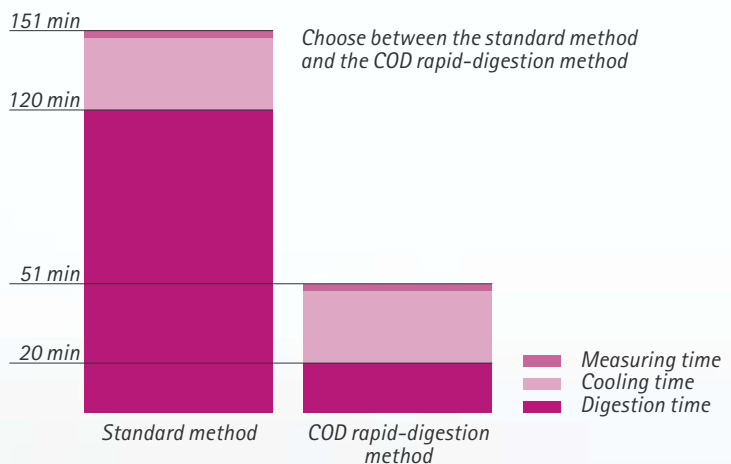
## COD rapid-digestion method

According to the relevant standard (ISO 15705), the COD determination with cell tests is performed at 148°C, since the COD/water mixture in the cell already boils at this temperature. Higher digestion temperatures are thus not appropriate in this case. The conventional boiling time is 120 minutes: however, as practical experiments have shown, most wastewater samples are already adequately digested within the space of just 20 minutes.

Besides the standard method we therefore offer a COD rapid-digestion method that has the following advantages:

- Standard-compliant digestion temperature (148°C)
- No additional investments are necessary, since standard thermoreactors can be used.
- Depending on the number of samples, the user can choose between thermoreactors with twelve or 24 wells, meaning that a large number of samples can be processed simultaneously.

Further details and an extensive description are given in the COD rapid-digestion application data sheet, available on request.



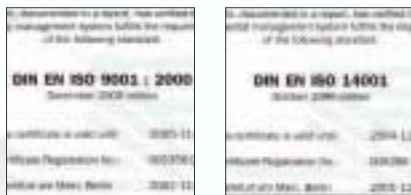
# The quality guarantee Simply reliable.

Quality is second nature for us. Over 100 years of competence and leadership in the field of analysis are inconceivable without the high quality demands we make of ourselves. We are a company that has been certified according to DIN EN ISO 9001 ever since 1992 and according to DIN EN ISO 14001 since 2001.

## The quality of the Spectroquant® test kits

Stringent raw-material controls, effective in-process controls, and thoroughly documented end-product controls are the guarantees for the consistently high quality of our test kits. Every batch that comes off the production lines is given its own batch certificate, meaning that you do not need to run a quality control on delivery of the kits yourself. The batch certificates, which you can find on the internet at <http://photometry.merck.de>, can also be used for official audit purposes.

Many Spectroquant® tests are officially recognized by the American environmental-protection agency as suited for determinations in drinking water and wastewater and bear the corresponding "USEPA Approved" seal of quality.



## Validation of the analytical methods

Validation here means the testing of the performance capacity of a given analytical method. The characteristic data of the method obtained in our development laboratories – measuring range, limit of detection, accuracy, selectivity, sensitivity, calibration function, and robustness of the method – are all documented. These data are quality characteristics and form the basis for quality assurance in routine analysis.

## Certificate for the suitability of Spectroquant® test kits for self-monitoring

The characteristic method data for each test kit, determined according to standardized procedures, are summarized in a quality certificate. This certificate guarantees the consistent quality of all batches that have been supplied to customers so far. Both the quality certificates as well as batch certificates for each Spectroquant® test kit can be accessed on the web at <http://photometry.merck.de>.

## Quality of the Spectroquant® photometers

The same principles also apply to the production of the photometers. Each instrument is accompanied by a test report that not only documents the optical tests (photometric accuracy, linearity, reproducibility, wavelength accuracy), but also confirms the electrical safety.



### Measuring range

Working range within which the method yields reliable results.

### Sensitivity

indicates the degree to which a result changes relative to the signal of the measurement system. This can be shown in quantitative terms by the gradient of the calibration curve.

### Lower Limit of Detection (LLD)

the smallest content of an analyte, the result for which may be taken as indicating the presence of the analyte with a sufficient statistical probability.

### Method Detection Limit (MDL)

is that content of an analyte, the result for which may be taken as indicating the presence of the analyte with a high statistical probability (equivalent to the lower limit of the measuring range).

### Confidence interval

Every measurement value bears the risk of error, even the results for the calibration curve. The confidence interval expresses the range in which the "true" curve lies.

### Standard deviation of the method

absolute measure of the precision.

### Coefficient of variation for the method

relative measure of the precision.

### Accuracy

measure for the approximation of the result to the "true" value, a summarical term for precision and accuracy.



# Quality assurance Simply start to finish.

Measurement results are principally prone to errors. Only the taking of start-to-finish quality-assurance measures ensures that the results of your measurements become secure and reproducible analysis results. The components of the professional AQA concept are proven means for your own Internal Quality Control (IQC) measures, such as the ones required e.g. by the A 704 technical data sheet of the German Wastewater Engineering Association.

## AQA without compromises

A start-to-finish quality check must encompass the entire system, testing both the instruments and equipment as well as the operating and handling. We supply the tools required for this job. You yourself decide with which regularity and for which parameters you perform Analytical Quality Assurance.

In the event that the results of the quality check does not meet up to the required specifications, the results of all analyses conducted since the last check must be considered doubtful. Running checks on a regular basis can help avoid such uncertainty.

We make the job easy for you. The tools necessary to check the instruments and the entire analysis system are available in ready-to-use packages.

*AQA2 [4w]:  
The photometer shows  
the next AQA check  
in 4 weeks' time.*

## You have the choice

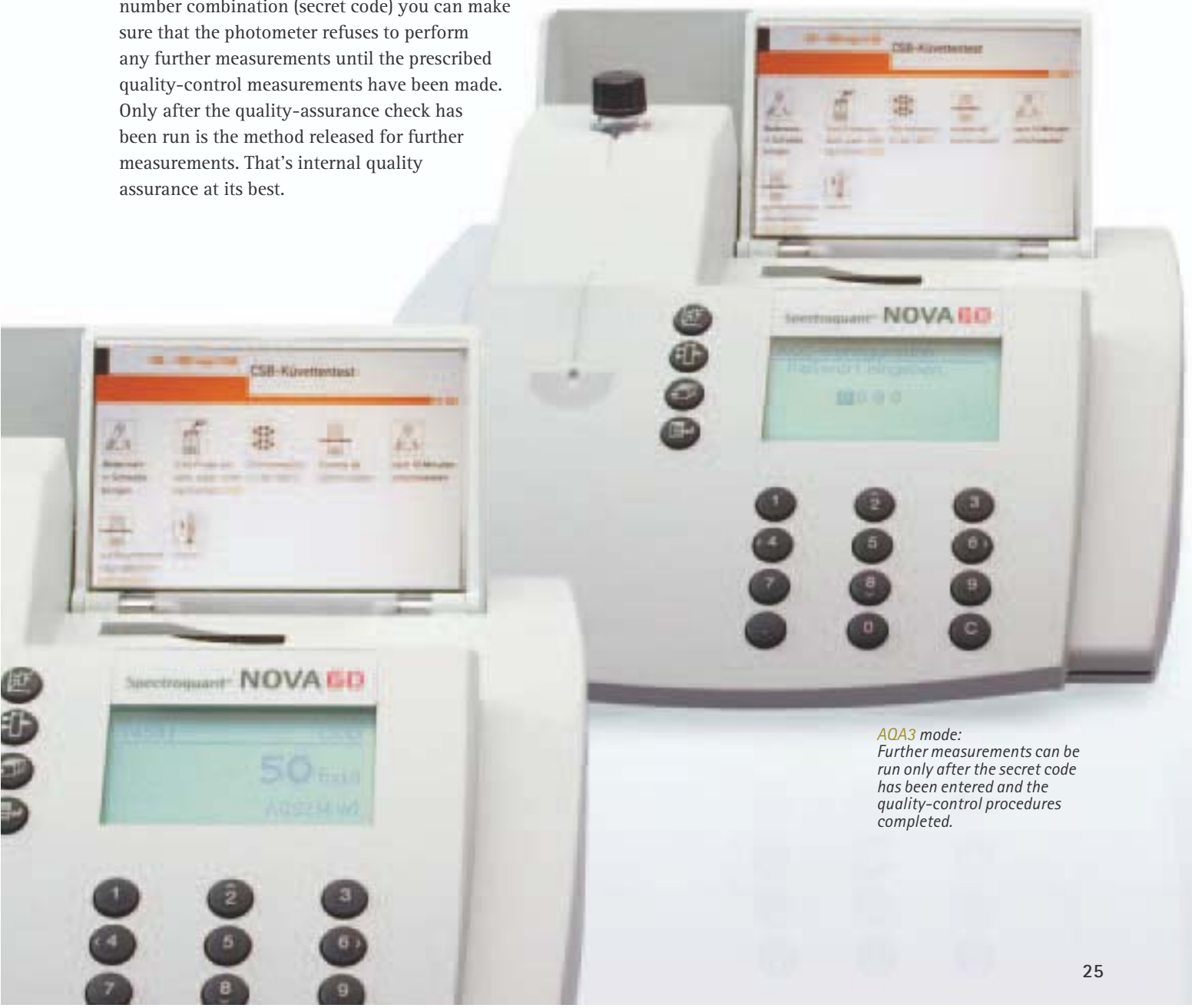
In the **AQA1** mode the photometer is checked with the aid of certified colour standards (Spectroquant® PhotoCheck).

In the **AQA2** mode the entire system is checked comprehensively by means of certified multiparameter standards (Spectroquant® CombiCheck).

In the **AQA3** mode the quality assurance of the overall system is obligatory. By entering a number combination (secret code) you can make sure that the photometer refuses to perform any further measurements until the prescribed quality-control measurements have been made. Only after the quality-assurance check has been run is the method released for further measurements. That's internal quality assurance at its best.

## Documentation without gaps

The performance of the AQA operations is documented in compliance with the GLP regulations in the form of a measurement report. Once successfully controlled for quality, each measurement result is given the "AQA" suffix in the measurement report. This securely documents that the system has been properly tested.



**AQA3 mode:**  
Further measurements can be run only after the secret code has been entered and the quality-control procedures completed.

# The tools for quality tests

## Simply correct.

### Checking the photometer Spectroquant® PhotoCheck

The photometers must be checked for their wavelength accuracy and linearity of the absorbance measurement. Spectroquant® PhotoCheck comprises a complete set of colour solutions with an excellent long-term stability. The traceability of this test medium to international standards is guaranteed by checking them in a reference spectrophotometer, which in turn is monitored with primary standards (NIST standards).

Spectroquant® PhotoCheck is thus suitable as a secondary standard for the control of inspection, measuring, and test equipment in the sense of DIN EN ISO 9001 and 14001.

*With Spectroquant® PhotoCheck you can check the photometers and thus secure the accuracy of your analysis results.*

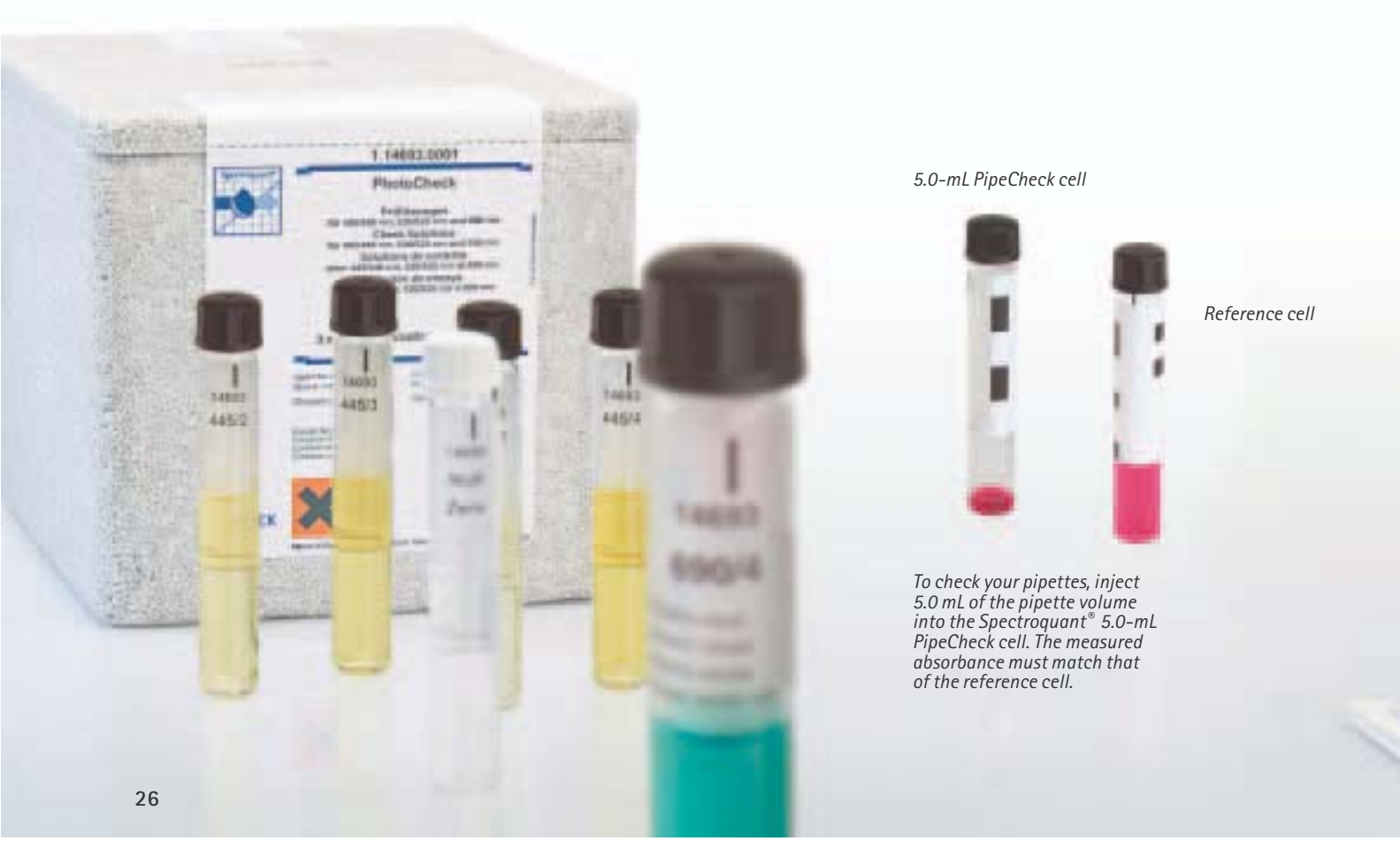
### Checking the thermoreactor Thermosensor for TR 420/620

The temperature sensor measures the current temperature in the compartment of the thermoreactor and comparing it with the specified temperature. The results can be transmitted to a PC for documentation purposes.

### Checking the pipettes Spectroquant® PipeCheck

Pipettes must be checked at regular intervals in the context of Internal Quality Control (IQC). Usually these checks take the form of weighing the liquid volume on a calibrated precision balance. However, such a balance is not always readily available.

With the Spectroquant® PipeCheck you can check the pipettes and document the values appropriately, thus making an important contribution to securing the accuracy of your analysis results.



5.0-mL PipeCheck cell

Reference cell

*To check your pipettes, inject 5.0 mL of the pipette volume into the Spectroquant® 5.0-mL PipeCheck cell. The measured absorbance must match that of the reference cell.*

## Checking the complete system Standard solutions

Our comprehensive range of ready-to-use standard solutions is naturally also at your disposal. You can prepare standards for almost every parameter in any concentration you wish simply by making the appropriate dilution.

*Ready-to-use standard solutions for checking the overall system are available for the broad majority of parameters.*

Spectroquant® CombiCheck 10 to check COD, ammonium, nitrate, phosphate, chloride, and sulfate in slightly contaminated wastewater

Spectroquant® CombiCheck 20 to check COD, ammonium, nitrate, phosphate, chloride, and sulfate in strongly contaminated wastewater

Spectroquant® CombiCheck 30 to check cadmium, iron, copper, and manganese

Spectroquant® CombiCheck 40 to check aluminium, lead, nickel, and zinc

Spectroquant® CombiCheck 50 to check COD, ammonium, and nitrogen in low concentration

Spectroquant® CombiCheck 60 to check COD and chloride

Spectroquant® CombiCheck 70 to check COD, ammonium, and nitrogen in high concentration

Spectroquant® CombiCheck 80 to check COD, nitrate, and phosphate in high concentration

## Checking the complete system Spectroquant® CombiCheck

When it comes to checking the overall system – test kit, sample pretreatment, measurement instrument, your own operation and handling – the multiparameter standard solutions contained in the various Spectroquant® CombiCheck packages with precisely defined contents of the analyte in question are optimally suited. These standards can be directly traced back to NIST standards.

Each CombiCheck package contains a standard solution and an addition solution. When the check shows the specified concentration of the standard solution, the complete analysis system is correct. In the event of any deviations, you have to go “trouble-shooting”.

Using the addition solution can identify measurement errors that are due to the matrix (e.g. the presence of interfering substances). In the case that the recovery rate is insufficient, this interference must be eliminated by diluting the sample or by taking the corresponding sample-pretreatment measures.

### Ordering information

Cat. No.	Product name
1.14693.0001	Spectroquant® PhotoCheck
1.14962.0001	Spectroquant® PipeCheck
1.71203.0001	Thermosensor for TR 420/620
1.71204.0001	PC cable for TR 420/620
1.14676.0001	Spectroquant® CombiCheck 10
1.14675.0001	Spectroquant® CombiCheck 20
1.14677.0001	Spectroquant® CombiCheck 30
1.14692.0001	Spectroquant® CombiCheck 40
1.14695.0001	Spectroquant® CombiCheck 50
1.14696.0001	Spectroquant® CombiCheck 60
1.14689.0001	Spectroquant® CombiCheck 70
1.14738.0001	Spectroquant® CombiCheck 80



# The service Simply competent.

We offer our customers the world over a comprehensive range of services, starting with professional training, via practically oriented application counselling, all the way to environmentally compatible disposal issues. The safe use of the Spectroquant<sup>®</sup> analysis system is an essential component of the AQA principle.

## On-the-spot counselling

Besides the analytical counselling and the technical instruction by our experts on the spot, there is a competent and practically oriented phone hotline available in virtually every country in the world. Queries are answered immediately or else forwarded to our specialists in the R&D areas.

## Training courses and seminars

Regular seminars are held that help out with tips and tricks in connection with analysis and help you avoid making application errors in your everyday laboratory operations. These training courses and seminars are always held for just a small number of participants, thus guaranteeing an intensive exchange of experience. The questions raised by the participants are dealt with in depth and individually.

## Internet

On the internet you can find information on our products, our applications, and our service. Visit the website <http://photometry.merck.de> to download, free of charge, the latest method data and instructions for use for the photometers. The web also provides access to quality certificates, batch certificates, and special applications. The page "Photometric test kits from A-Z" will tell you all you need to know about our products.

## Reference laboratory

If you wish to compare your investigation results with reference methods of accredited laboratories, we can offer you this service in cooperation with our unaffiliated external partners.



## Safety information

We stock a comprehensive range of literature on the broadest range of analytical issues for our customers. Merck offers the most extensive range of analytical products worldwide and is internationally acknowledged as having the greatest competence in chemical analysis. Why not make use of our know-how? Various publications provide you with a swift and up-to-date overview of developments in the field of environmental analysis. Detailed safety data sheets – also in the form of electronic files – are available for all safety-relevant issues.

## Applications

Our Spectroquant® system can be directly used for the analysis of drinking water and “normal” wastewater analysis. There are, however, specific areas of application – for instance the determination of calcium in milk, of chloride in concrete, or of phosphorus in waste-dump run-off water – that require special sample-pretreatment measures. To enable you to perform such analyses without having to expend too much effort, we also stock more than 250 such specific applications for you that can help you perform your tasks. Further applications are added on a regular basis.

## Disposal

The environmental-protection philosophy starts with the foresighted development of new products under the use of safe and environmentally compatible methods. The recycling of used reagents is already a consideration early on in the conception and development of our products. Merck has thus established a comprehensive and customer-friendly concept for the entire Spectroquant® product range. In this concept not only the used packaging materials, but also the returned chemicals and reagents are recycled or disposed of in an environmentally compatible manner as possible.

*Thanks to the vast number of available applications, even the analysis of highly specialized samples poses no problem.*



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