

# Water Analysis

NANOCONTROL® Reagents



Solutions for photometry

- Bar coded tube tests with **pre-dosed reagents**
- For **highest accuracy** and **sensitivity** in water analysis
- *NANOCONTROL* for **analytical quality control**

MACHEREY-NAGEL

[www.mn-net.com](http://www.mn-net.com)



# NANOCOLOR® Reagents for photometric water analysis

NANOCOLOR® reagents are analytical reagents for photometric water analysis. They are particularly suitable for pre-calibrated NANOCOLOR® photometers from MACHEREY-NAGEL. Calibration data for evaluation with photometers from other manufacturers are listed in the product leaflets or are available on request.

Clear step-by-step instructions guide you through the test procedures of all NANOCOLOR® tests. Thus even operators with basic analytical experience can be confident in getting reliable results in no time. However, NANOCOLOR® reagents are also fully recognized and appreciated by qualified analysts, who look for time saving procedures with no loss of accuracy. The instruction leaflets provide additional information on storage, interferences, analytical quality control and safety precautions.



## NANOCOLOR® tube tests

- Bar code cuvette identification
- Precisely pre-dosed reagents in 16 mm tubes
- Accurate reagent dosage with NANOFIX capsules
- Measurement directly in the test tube
- Minimal exposure to chemicals
- Reduced reagent consumption
- No preparation of blank values necessary
- Time saving and easy procedures
- Fast and reliable results
- 20 tests per pack

## NANOCOLOR® standard tests

- Measurement in 10, 20 or 50 mm cuvettes
- Extreme sensitivity due to large cuvette size
- Outstanding accuracy due to large sample volume
- Ready-to-use reagents
- Exact sample dosage in volumetric flasks
- Variable measuring ranges due to different cuvette sizes
- Easy dilutions for analysis of higher concentrations
- Low costs
- Up to 440 tests per pack



## NANOCONTROL standards

In many labs, reagents, measuring equipment and personal handling are already subject to validation from frequent internal or external control. Therefore, numerous customers rely on our NANOCONTROL standards to obtain objective proof of the NANOCOLOR® systems' accuracy.

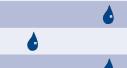
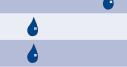
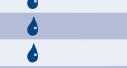
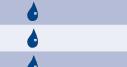
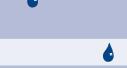
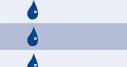
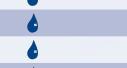
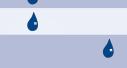
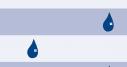
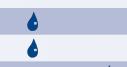
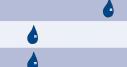
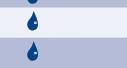
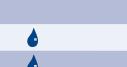
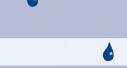
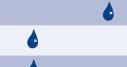
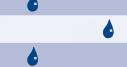
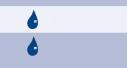
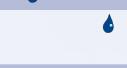
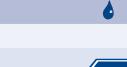
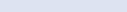
NANOCONTROL standards permit easy analytical quality control, simplify the corresponding documentation and give operators confidence in their measured results.



- Ready-to-use standard solutions, containing one or several substances in known concentrations.
- Separate spiked-solutions detect possible interferences in the sample.
- Composition and concentrations of multistandards tailored to specific user groups e.g. waste water treatment, drinking water production or others.
- The standards are supplied with a document, in which the expected concentration and given tolerance range are stated for each parameter. There is also plenty of space for documentation of quality control procedures performed by the operator.
- Production control based on DIN/EN standards ensures reproducible accuracy of NANOCONTROL standards.

# NANOCOLOR® Reagents for photometric water analysis

## NANOCOLOR® tube tests and standard tests

Test	Measuring ranges	Wave-length	No of tests	REF		
Aluminium	0.01 – 1.00 mg/l Al <sup>3+</sup>	540 nm	200	918 02		
Aluminium 07	0.02 – 0.70 mg/l Al <sup>3+</sup>	540 nm	19	985 098		
Ammonium	0.01 – 2.0 mg/l NH <sub>4</sub> -N	0.01 – 2.5 mg/l NH <sub>4</sub> <sup>+</sup>	690 nm	100	918 05	
Ammonium 3	0.04 – 2.30 mg/l NH <sub>4</sub> -N	0.05 – 3.00 mg/l NH <sub>4</sub> <sup>+</sup>	690 nm	20	985 003	
Ammonium 10	0.2 – 8.0 mg/l NH <sub>4</sub> -N	0.2 – 10.0 mg/l NH <sub>4</sub> <sup>+</sup>	690 nm	20	985 004	
Ammonium 50	1.0 – 40.0 mg/l NH <sub>4</sub> -N	1.0 – 50.0 mg/l NH <sub>4</sub> <sup>+</sup>	690 nm	20	985 005	
Ammonium 100	4 – 80 mg/l NH <sub>4</sub> -N	5 – 100 mg/l NH <sub>4</sub> <sup>+</sup>	585 nm	20	985 008	
Ammonium 200	30 – 160 mg/l NH <sub>4</sub> -N	40 – 200 mg/l NH <sub>4</sub> <sup>+</sup>	585 nm	20	985 006	
AOX 3	0.1 – 3.0 mg/l AOX	0.01 – 0.30 mg/l AOX	470 nm	20	985 007	
BOD <sub>5</sub>	2 – 3000 mg/l O <sub>2</sub>		436 nm	25 – 50	985 822	
BOD <sub>5</sub> -TT	2 – 3000 mg/l O <sub>2</sub>		436 nm	22	985 825	
Cadmium 2 <sup>1)</sup>	0.05 – 2.00 mg/l Cd <sup>2+</sup>		520 nm	10 – 19	985 014	
Carbonate hardness 15	1.0 – 15.0 °d	0.4 – 5.4 mmol/l H <sup>+</sup>	436/585 nm	20	985 015	
Chloride	0.2 – 125 mg/l Cl <sup>-</sup>		470 nm	220	918 20	
Chloride 50	0.5 – 50.0 mg/l Cl <sup>-</sup>		470 nm	20	985 021	
Chloride 200	5 – 200 mg/l Cl <sup>-</sup>		470 nm	20	985 019	
Chlorine	0.02 – 10.0 mg/l Cl <sub>2</sub>		540 nm	250	918 16	
Chlorine/Ozone 2	0.05 – 2.50 mg/l Cl <sub>2</sub>	0.05 – 2.00 mg/l O <sub>3</sub>	540 nm	20	985 017	
Chlorine dioxide	0.04 – 4.00 mg/l ClO <sub>2</sub>		540 nm	50	918 163	
Chlorine dioxide 5	0.15 – 5.00 mg/l ClO <sub>2</sub>		540 nm	20	985 018	
Chromate	0.01 – 3.0 mg/l Cr(VI)	0.01 – 6.0 mg/l CrO <sub>4</sub> <sup>2-</sup>	540 nm	250	918 25	
Chromate 5	0.05 – 2.00 mg/l Cr(VI)	0.1 – 4.0 mg/l CrO <sub>4</sub> <sup>2-</sup>	540 nm	20	985 024	
	0.005 – 0.500 mg/l Cr(VI) □ <sup>2)</sup>	0.01 – 1.00 mg/l CrO <sub>4</sub> <sup>2-</sup> □ <sup>2)</sup>				
Cobalt	0.002 – 0.70 mg/l Co <sup>2+</sup>		540 nm	220	918 51	
COD 40	2 – 40 mg/l O <sub>2</sub>		345 nm	20	985 027	
COD 60	5 – 60 mg/l O <sub>2</sub>		345 nm	20	985 022	
COD 160	15 – 160 mg/l O <sub>2</sub>		436 nm	20	985 026	
COD 160 Hg-free	15 – 160 mg/l O <sub>2</sub>		436 nm	20	963 026	
COD 300	50 – 300 mg/l O <sub>2</sub>		436 nm	20	985 033	
COD 1500	100 – 1500 mg/l O <sub>2</sub>		620 nm	20	985 029	
COD 10000	1.00 – 10.00 g/l O <sub>2</sub>		620 nm	20	985 023	
COD 15000	1.0 – 15.0 g/l O <sub>2</sub>		620 nm	20	985 028	
COD 60000	5.0 – 60.0 g/l O <sub>2</sub>		620 nm	20	985 012	
Colour (Hazen/DIN) <sup>6)</sup>	5 – 500 mg/l Pt (Hazen)	0.2 – 20.0	436 nm	–	Test 1-39	
org. Complexing agents 10	0.5 – 10.0 mg/l I <sub>BIK</sub>		540 nm	10 – 19	985 052	
(screening test)						
Copper <sup>8)</sup>	0.01 – 10.0 mg/l Cu <sup>2+</sup>		585 nm	250	918 53	
Copper 7	0.10 – 7.00 mg/l Cu <sup>2+</sup>		585 nm	20	985 054	
Cyanide	0.001 – 0.50 mg/l CN <sup>-</sup>		585 nm	250	918 30	
Cyanide 08	0.01 – 0.80 mg/l CN <sup>-</sup>	0.002 – 0.100 mg/l CN <sup>-</sup> □ <sup>2)</sup>	585/ 605 nm	20	985 031	
DEHA 1	0.05 – 1.00 mg/l DEHA		540 nm	20	985 035	
Ethanol 1000	0.10 – 1.00 g/l EtOH	0.013 – 0.130 Vol.% EtOH	620 nm	23	985 838	
Fluoride	0.05 – 2.00 mg/l F <sup>-</sup>		585 nm	200	918 142	
Fluoride 2	0.1 – 2.0 mg/l F <sup>-</sup>		620 nm	20	985 040	
Formaldehyde 8	0.1 – 8.0 mg/l HCHO		585 nm	20	985 041	
Formaldehyde 10	0.20 – 10.00 mg/l HCHO	0.02 – 1.00 mg/l HCHO □ <sup>2)</sup>	412 nm <sup>4)</sup>	20	985 046	
Hardness 20	1.0 – 20.0 °d	5 – 50 mg/l Mg <sup>2+</sup>	540 nm	20	985 043	
	0.2 – 3.6 mmol/l	10 – 100 mg/l Ca <sup>2+</sup>				
residual Hardness 1	0.02 – 1.00 °d	0.004 – 0.180 mmol/l	540 nm	20	985 084	
HC 300	0.5 – 5.6 mg/l HC	30 – 300 mg/kg HC	436 nm	20	985 057	
(Hydrocarbons)						
Hydrazine	0.002 – 1.50 mg/l N <sub>2</sub> H <sub>4</sub>		436 nm	220	918 44	
Iron <sup>8)</sup>	0.01 – 15.0 mg/l Fe		470 nm	250	918 36	
Iron 3	0.10 – 3.00 mg/l Fe	0.02 – 1.00 mg/l Fe □ <sup>2)</sup>	540 nm	20	985 037	
Lead 5 <sup>1)</sup>	0.10 – 5.00 mg/l Pb <sup>2+</sup>		520 nm	20	985 009	
Manganese <sup>8)</sup>	0.01 – 10.0 mg/l Mn		470 nm	250	918 60	
Manganese 10	0.1 – 10.0 mg/l Mn	0.02 – 2.00 mg/l Mn □ <sup>2)</sup>	470 nm	20	985 058	
Methanol 15	0.2 – 15.0 mg/l MeOH		620 nm	23	985 859	
Molybdenum 40	1.0 – 40.0 mg/l Mo(VI)	1.6 – 65.0 mg/l MoO <sub>4</sub> <sup>2-</sup>	345/ 365 nm	20	985 056	
Nickel <sup>4)</sup>	0.01 – 10.0 mg/l Ni <sup>2+</sup>		436 nm	250	918 62	
Nickel 7	0.10 – 7.00 mg/l Ni <sup>2+</sup>	0.02 – 1.00 mg/l Ni <sup>2+</sup> □ <sup>2)</sup>	470 nm	20	985 061	
Nitrate	0.9 – 30.0 mg/l NO <sub>3</sub> -N	4 – 140 mg/l NO <sub>3</sub> <sup>-</sup>	365/ 385 nm	100	918 65	
Nitrate Z	0.02 – 1.0 mg/l NO <sub>3</sub> -N	0.1 – 5.0 mg/l NO <sub>3</sub> <sup>-</sup>	520 nm	440	918 63	

# NANOCOLOR® Reagents for photometric water analysis

## NANOCOLOR® tube tests and standard tests

Test	Measuring ranges	Wave-length	No of tests	REF		
Nitrat 8	0.30 – 8.00 mg/l NO <sub>3</sub> -N	470 nm	20	985 061		
Nitrate 50	0.3 – 22.0 mg/l NO <sub>3</sub> -N	365 nm 385 nm	20	985 064		
Nitrate 250	4 – 60 mg/l NO <sub>3</sub> -N	20 – 250 mg/l NO <sub>3</sub> <sup>-</sup>	365/ 385 nm	20	985 066	
Nitrite <sup>8)</sup>	0.002 – 0.30 mg/l NO <sub>2</sub> -N	0.005 – 1.00 mg/l NO <sub>2</sub> <sup>-</sup>	520 nm	220	918 67	
Nitrite 2	0.003 – 0.460 mg/l NO <sub>2</sub> -N	0.02 – 1.50 mg/l NO <sub>2</sub> <sup>-</sup>	540 nm	20	985 068	
Nitrite 4	0.1 – 4.0 mg/l NO <sub>2</sub> -N	0.3 – 13.0 mg/l NO <sub>2</sub> <sup>-</sup>	540 nm	20	985 069	
total Nitrogen TN <sub>b</sub> 22	0.5 – 22.0 mg/l N		365/ 385 nm	20	985 083	
total Nitrogen TN <sub>b</sub> 220	5 – 220 mg/l N		365/ 385 nm	20	985 088	
Organic acids 3000	30 – 3000 mg/l CH <sub>3</sub> COOH	0.5 – 50.0 mmol/l CH <sub>3</sub> COOH	470 nm	20	985 050	
Oxygen 12	0.5 – 12.0 mg/l O <sub>2</sub>		436 nm	22	985 082	
Peroxide 2	0.03 – 2.00 mg/l H <sub>2</sub> O <sub>2</sub>		620 nm	10 – 19	985 871	
pH 6.5 – 8.2 <sup>3)</sup>	pH 6.5 – 8.2		436 nm	100	918 72	
Phenol	0.01 – 7.0 mg/l Phenol		470 nm	440	918 75	
Phenolic index 5 <sup>1)</sup>	0.2 – 5.0 mg/l		520 nm	20	985 074	
ortho-Phosphate	0.04 – 6.5 mg/l PO <sub>4</sub> <sup>3-</sup> -P	0.1 – 20.0 mg/l PO <sub>4</sub> <sup>3-</sup>	690 nm	440	918 77	
ortho-Phosphate <sup>8)</sup>	0.2 – 17 mg/l PO <sub>4</sub> <sup>3-</sup> -P	0.5 – 50 mg/l PO <sub>4</sub> <sup>3-</sup>	436 nm	440	918 78	
ortho- and total-Phosphate 1	0.05 – 1.50 mg/l P	0.2 – 5.0 mg/l PO <sub>4</sub> <sup>3-</sup>	690 nm	19	985 076	
	0.010 – 0.800 mg/l P <sup>2)</sup>	0.03 – 2.50 mg/l PO <sub>4</sub> <sup>3-</sup> <sup>2)</sup>				
ortho- and total-Phosphate 5	0.20 – 5.00 mg/l P	0.5 – 15.0 mg/l PO <sub>4</sub> <sup>3-</sup>	690 nm	19	985 081	
ortho- and total-Phosphate 15	0.30 – 15.00 mg/l P	1.0 – 45.0 mg/l PO <sub>4</sub> <sup>3-</sup>	690 nm	19	985 080	
ortho- and total-Phosphate 45	5.0 – 50.0 mg/l P	15 – 150 mg/l PO <sub>4</sub> <sup>3-</sup>	690 nm	19	985 055	
ortho- and total-Phosphate 50	10.0 – 50.0 mg/l P	30 – 150 mg/l PO <sub>4</sub> <sup>3-</sup>	436 nm	19	985 079	
POC 200	20 – 200 mg/l POC	2 – 40 mg/l KWI	436 nm	20	985 070	
(polyoxycarboxylic acids)						
Potassium 50	2 – 50 mg/l K <sup>+</sup>		690 nm	20	985 045	
Silica <sup>8)</sup>	0.01 – 5.00 mg/l Si	0.02 – 10.0 mg/l SiO <sub>2</sub>	690 nm	250	918 48	
	0.002 – 0.100 mg/l Si <sup>3)</sup>	0.005 – 0.200 mg/l SiO <sub>2</sub> <sup>7)</sup>	800 nm			
Silver 3	0.20 – 3.00 mg/l Ag <sup>+</sup>		620 nm	20	985 049	
Starch 100	5 – 100 mg/l Starch		540 nm	19	985 085	
Sulphate 200	10 – 200 mg/l SO <sub>4</sub> <sup>2-</sup>		436 nm	20	985 086	
Sulphate 1000	200 – 1000 mg/l SO <sub>4</sub> <sup>2-</sup>		436 nm	20	985 087	
Sulphide	0.01 – 3.0 mg/l S <sup>2-</sup>		620 nm	250	918 88	
			660 nm			
Sulphide 3	0.05 – 3.00 mg/l S <sup>2-</sup>		620 nm	20	985 073	
Sulphite 10	0.2 – 10.0 mg/l SO <sub>3</sub> <sup>2-</sup>	0.05 – 2.40 mg/l SO <sub>3</sub> <sup>2-</sup> <sup>2)</sup>	436 nm	20	985 089	
Sulphite 100	5 – 100 mg/l SO <sub>3</sub> <sup>2-</sup>		470 nm	19	985 090	
anionic Surfactants 4	0.20 – 4.00 mg/l MBAS		620 nm	20	985 032	
cationic Surfactants 4	0.20 – 4.00 mg/l CTAB		620 nm	20	985 034	
nonionic Surfactants 15	0.3 – 15.0 mg/l Triton® X-100		610 nm	20	985 047	
			620 nm			
Thiocyanate 50	0.5 – 50.0 mg/l SCN <sup>-</sup>		470 nm	20	985 091	
Tin 3 <sup>1)</sup>	0.10 – 3.00 mg/l Sn		520 nm	18	985 097	
TOC 25	2.0 – 25.0 mg/l C		585 nm	10	985 093	
TOC 60	10 – 60 mg/l C		585 nm	10	985 094	
TOC 600	40 – 600 mg/l C		585 nm	10	985 099	
TTC / Sludge activity 150	5 – 150 µg TPF	0.050 – 2.300 E	470 nm	20	985 890	
Turbidity (formazine/DIN) <sup>5)</sup>	1 – 100 TE/F (= FAU)	0.5 – 40.0 <sup>1/m</sup>	620 nm	–	Test	
			860 nm		1-92	
Turbidity <sup>5) 6)</sup>	1 – 1000 NTU		–	Test		
Zinc	0.02 – 3.0 mg/l Zn <sup>2+</sup>		620 nm	250	918 95	
Zinc 4	0.10 – 4.00 mg/l Zn <sup>2+</sup>		620 nm	20	985 096	

1) This test cannot be evaluated with the NANOCOLOR® 250 D

2) a more sensitive measuring range is possible by using 50 mm semi-micro cuvettes (REF 919 50)

3) without bar code

4) special filter necessary

5) evaluation only possible with NANOCOLOR® UV/VIS

6) A NANOCOLOR® standard test is not required. The original sample has to be measured without additional reagents.

7) High sensitivity measurement

8) Simplified procedure in a beaker is possible. Please ask for special instructions!

# NANOCOLOR® Reagents for photometric water analysis

## Application areas

Test	Municipal waste water	Industrial waste water	Drinking water	Boiler feed water	Cooling water	Surface water	Breweries	Paper industry	Textile industry	Leather industry	Chemical industry	Metal processing industry	Electroplating industry	Photo industry	Dairy industry	Aquaculture and beverages industry	Food and fish farming	Sea water analysis	Pharmaceutical industry	Concrete and cement production	Leakage from garbage dumps	Swimming pools	Disinfection					
Aluminium	●	●	●																									
Ammonium	●	●	●																									
AOX	●	●																										
BOD <sub>5</sub>	●	●																										
Cadmium			●																									
Carbonate hardness			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
Chloride	●	●		●	●	●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					
Chlorine	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
Chlorine dioxide		●																				●	●	●				
Chromium/ Chromate	●	●				●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
Cobalt						●															●							
COD	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
Colour			●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
Org. complexing agents					●																			●				
Copper	●	●	●		●	●		●												●	●	●	●	●				
Cyanide	●	●			●															●	●	●	●	●				
Detergents						●			●											●	●	●	●	●				
DEHA				●																								
Ethanol							●														●	●			●			
Fluoride		●																		●	●							
Formaldehyde												●													●			
Hardness, Calcium, Magnesium		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
Hydrocarbons			●	●	●	●			●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Hydrazine				●																								
Iron	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
Lead		●			●																●	●			●			
Manganese	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
Methanol							●																					
Molybdenum		●	●	●	●	●																						
Nickel		●				●																						
Nitrate	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
Nitrite	●	●	●																	●	●	●	●	●	●			
Total Nitrogen	●	●																										
Organic Acids	●	●																										
Oxygen				●		●	●													●	●	●	●	●				
Ozone					●															●	●					●		
Peroxide					●															●	●	●	●	●	●	●		
pH		●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Phenol																												
Phosphate	●	●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
POC					●	●																						
Potassium																												
Residual hardness					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Silica						●																						
Starch								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Sulphate	●	●				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Sulphide	●																											
Sulphite	●																											
Surfactants	●																											
Thiocyanate																												
Tin																												
TOC	●	●																										
Turbidity			●																									
TTC	●	●																										
Zinc	●	●																										

# NANOCOLOR® Reagents for photometric water analysis

## Legal acceptance

The chemistry of our NANOCOLOR® test kits is based on international norms and regulations for the analysis of water, waste water and sludge (DIN, EN, ISO, APHA and EPA, e.g. ISO 15705 – Water quality – Determination of the chemical oxygen demand index (ST-COD) – Small-scale sealed tube method). Accuracy, precision and detection limits of test kits fulfil the requirements of specific national and international guidelines for water quality and water analysis (e.g. EC Drinking Water Directive 98/83/EC, German Drinking Water Directive, German Federal laws and State laws governing water protection and water analysis).

## COD tube tests in accordance to ISO 15705



With the NANOCOLOR® system for photometric water analysis, MACHEREY-NAGEL offers an environment-friendly, cost-effective and time-saving system for the determination of chemical oxygen demand in accordance with the ISO norm 15705.

For the first time ever, the ISO 15705 ("Water quality - Determination of the chemical oxygen demand index (ST-COD) - Small-scale sealed tube method") describes a photometric tube test as a standardized and internationally accepted method for the analysis of water and waste water.

MACHEREY-NAGEL confirms, that every component of the NANOCOLOR® system for photometric water analysis fulfils all requirements concerning reagents, sample volume, digestion conditions and photometric determination of the ISO 15705.

## Quality Assurance

During production, filling and storage, NANOCOLOR® reagents are constantly controlled by a quality system, which fulfils the requirements of DIN EN ISO 9001. Our routine quality assurance ensures consistent calibration accuracy, as well as highly accurate results during the entire shelf-life of NANOCOLOR® test kits.

## Accuracy of results

Ring tests among our customers and participation in external ring tests have shown that deviations of less than 5% from nominal results, given by standard methods, can be expected when using NANOCOLOR® reagents. Nominal calibration values deviate less than 3% from photometers' calibrations.

## NANOCONTROL NANOCHECK

REF 925 701

NANOCONTROL NANOCHECK test solutions are suitable for the determination of photometric accuracy of MACHEREY-NAGEL photometers. They are secondary standards for the control of inspection, measuring and test equipment in accordance to ISO 9001 and ISO 14001. They are checked and documented with a reference photometer which is monitored with primary standards (NIST traceable standards). The results are documented.

Only 2 stable colour solutions are necessary to check the wavelength accuracy and the linearity of the absorbance measurement.



Your local distributor:

[www.mn-net.com](http://www.mn-net.com)

**MACHEREY-NAGEL**



MACHEREY-NAGEL GmbH & Co. KG · Neumann-Neander-Str. 6-8 · D-52355 Düren · Germany

Germany and international:

Tel.: +49 (0) 24 21 96 90  
Fax: +49 (0) 24 21 96 91 99  
E-mail: info@mn-net.com

Switzerland:

MACHEREY-NAGEL AG  
Tel.: +41 (0) 62 388 55 00  
Fax: +41 (0) 62 388 55 05  
E-mail: sales-ch@mn-net.com

France:

MACHEREY-NAGEL EURL  
Tel.: +33 (0) 3 88 68 22 68  
Fax: +33 (0) 3 88 51 76 88  
E-mail: sales-fr@mn-net.com

