Water Analysis

NANOCOLOR® Heating Blocks

Heating blocks of the future

NANOCOLOR® VARIO 4 and *VARIO C2*

- Touch screen with intuitive user guidance
- Lockable protective lids for maximum safety
- USB interfaces for state-of-the-art PC connection
- COD, *total*-N and *total*-P in just 30 minutes
- Internal quality control according to ISO 9001

MACHEREY-NAGEL
www.mn-net.com
MN Since 1911

NANOCOLOR® Heating Blocks

Save time

Intuitive operation

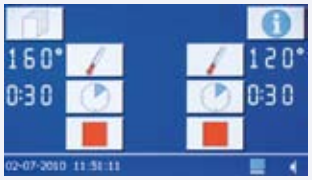
- Convenient input via icons
- Quick and easy selection of heating programs


Start screen


Temperature selection


Time selection


Program start



Time-saving procedures

- Extremely short warm-up times (from 20 to 160 °C in just 10 minutes)
- High-speed COD, *total*-Nitrogen, *total*-Phosphorous and *total*-Metals in just 30 minutes

Self-explanatory user guidance

- User-friendly, bright touch screen
- Operation without time-consuming training

Experience flexibility

The ideal size for any purpose

NANOCOLOR® *VARIO C2*: simultaneous digestion of up to 12 samples

NANOCOLOR® *VARIO 4*: simultaneous digestion of up to 24 samples in two individually controlled heating units for a higher sample throughput

Standard programs and easy programming

- 5 pre-programmed temperatures 70 / 100 / 120 / 148 / 160 °C
- 4 pre-programmed heating times 30 min / 60 min / 120 min / cont.
- 7 free memory locations between 40 -160 °C (1 °C increments)
- 8 free memory locations between 0h:01min – 9h:59min (1min increments)

Suitable for all *NANOCOLOR*® digestion methods

Application	Temperature	Time
COD (DIN ISO 15705)	148 °C	120 min
High-speed COD	160 °C	30 min
TOC	120 °C	120 min
total-Nitrogen	120 °C	30 min
total-Phosphorous	120 °C	30 min
Organic acids	100 °C	10 min
total-Metals (Cadmium, Chromate, Iron, Cobalt, Copper, Nickel, Zinc)	120 °C	30 min
AOX	120 °C	30 min
Hydrocarbons	148 °C	120 min
Programmable, user-defined programs	40 – 160 °C	0h:01min – 9h:59min

Be safe

Constant digestion conditions

- High temperature stability
- Electronic overheating protection
- Graphic display of heating curves

Maximum safety for the user

- Extra strong safety covers as contact protection (10 mm, replaceable) on the heating block surface
- Lockable protective lids
- Display alert in case of open protective lid

Meet specifications

Internal quality control according to ISO 9001

- In conformance with requirements of internal quality control (IQC)
- Comply with demands of supervisors and authorities
- Heating curves to check temperature stability
- Electronic temperature control and fully automatic calibration with the *NANOCOLOR*® T-Set (REF 919 917)
- Comfortable data transfer via USB or serial interface RS 232
- Easy generation of quality certificates in accordance to GLP with the *NANOCOLOR*® T-Set software

NANOCOLOR® T-Set

Automatic temperature control and calibration of the heating blocks

- Connect the RS 232 plug of the T-Set to the heating block
- Place the temperature sensor into the small bore located on the safety cover

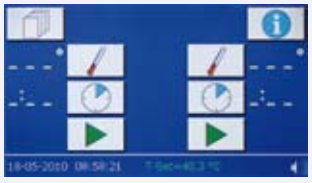
Select „T-Set“ in the menu

Select the respective program

Start the program

Universal thermometer for external temperature measurements

- Connect the RS 232 plug of the T-Set to the heating block
- Dip the temperature sensor into the respective sample solution
- The temperature is displayed in the heating block’s display



NANOCOLOR ® Heating blocks

Technical Data

Instrument:	NANOCOLOR ® VARIO 4	NANOCOLOR ® VARIO C2
Type:	Programmable heating blocks for chemical-analytical digestions with 24 or 12 holes / for test tubes with 16 mm OD (outer diameter) / integrated protective lids	
Display:	Coloured, backlit LCD touch screen	
Operation:	Display menu guidance via touch screen	
Temperatures:	5 pre-programmed temperatures: 70 / 100 / 120 / 148 / 160 °C 7 free memory locations for individual temperature settings	
Temperature range:	40 – 160 °C (1 °C increments)	
Temperature stability:	± 1 °C (according to DIN, EN, ISO and EPA methods)	
Warm-up time:	from 20 °C to 160 °C within 10 minutes	
Heating times:	4 preprogrammed heating times: 30 min / 60 min / 120 min / cont. 8 free memory locations for individual heating times	
Time range:	0h:01min – 9h:59min (increments 0h:01min)	
Safety:	Replaceable safety covers as contact protection Lockable protective lids Overheating protection	
Interfaces:	Bidirectional serial RS 232, USB A (master) and USB B (slave)	
Analytical quality control:	With NANOCOLOR ® T-Set (REF 919 917) optional fully automatic calibration and preparation of test certificates for instrument control and monitoring according to ISO 9001)	
Update:	Via internet and USB stick	
Power supply:	110 – 230 V ~, 50/60 Hz	
Power consumption:	250 / 500 VA	125 / 250 VA
Dimensions (B x T x H):	290 x 287 x 146 mm	169 x 282 x 146 mm
Weight:	approx. 3.2 kg	approx. 2.0 kg
Marking:	CE	
Warranty:	2 years	

CE These instruments conform to the following directives:
- 2006/95/EC – Low-Voltage Directive
- 004/108/EC - EMV Directive

Ordering information:

NANOCOLOR ® VARIO 4 Heating block incl. 2 protective lids, power line cord, USB cable, software-DVD, certificate and manual	REF 919 300
NANOCOLOR ® VARIO C2 Heating block incl. protective lid, power line cord, USB cable, software-DVD, certificate and manual	REF 919 350
NANOCOLOR ® T-Set Electronic temperature sensor incl. software-DVD, certificate and manual	REF 919 917

Your local distributor
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