

# NANOCOLOR® VARIO 4, VARIO C2 and VARIO C2 M

## Heating blocks for reliable digestions

The NANOCOLOR® heating blocks enable a fast and safe performance of all kinds of sample digestions required in water and waste water analysis. Standard parameters for routine digestions such as COD, TOC, total nitrogen, total phosphorus and metals are pre-programmed in the heating blocks and help the user to avoid mistakes.

### The small one and the big one

The heating block NANOCOLOR® VARIO C2 enables the simultaneous digestion of up to 12 samples. For a higher sample throughput the NANOCOLOR® VARIO 4 is perfectly suited, as it allows up to 24 simultaneous digestions in two separately controllable heating units. Therefore, MACHERY-NAGEL offers the appropriate heating block to each user for routine analysis in the laboratory. The NANOCOLOR® heating blocks are equipped with lockable protective lids and a touch protection for increased work safety. The NANOCOLOR® VARIO C2 M heating block with two 22 mm and eight 16 mm holes is available for the digestion of large sample volumes as part of metal analysis.

### Extremely versatile and maximally secure

In addition to the preprogrammed temperatures and heating times, a large number of user-specific digestion methods can be stored. The USB and RS232 interfaces allow an easy connection to a PC and enable the convenient linkage to the NANOCONTROL inspection equipment monitoring tools. The graphical representation of the heating curves enhances transparency about the temperature stability. The electronic over-temperature sensor protects the heating block from overheating.

### Temperature testing and calibration

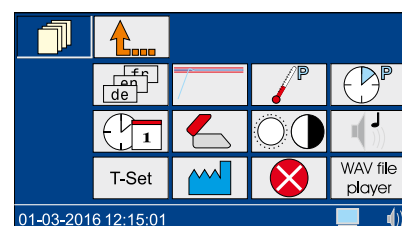
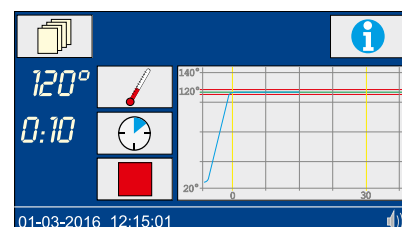
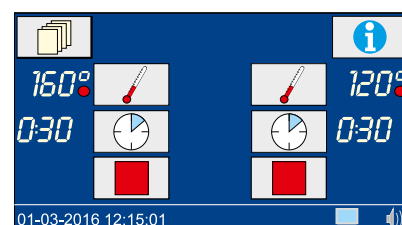
A temperature test can be performed using the NANOCOLOR® T-Sets to safeguard results against authorities and supervisors. The free PC software of the heating blocks facilitates checking of temperatures and the creation of the respective reports. After measurement data transfer via the interfaces using the PC software, the testing certificate is created directly, which ensures a GLP-compliant documentation of all equipment testing.

## Suitable for all NANOCOLOR® digestion methods

Application	Temperature	Time
COD according to 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 phosphorus	120 °C	30 min
Organic acids	100 °C	10 min
Total metals	120 °C	30 min
AOX	120 °C	30 min
Hydrocarbons	148 °C	120 min
Programmable, user-defined programs	40 °C–160 °C	0 h:01 min–9 h:59 min

### Good to know

The NANOCOLOR® T-Set is a simple and unique tool for inspection equipment monitoring of MACHERY-NAGEL heating blocks by the user himself. For further information about the NANOCOLOR® T-Set see page 140.



# NANOCOLOR® VARIO 4, VARIO C2 and VARIO C2 M

## Easy

- User-friendly touch screen
- Intuitive usage via icons
- Operation without the need for intensive training

## Fast

- All important parameters within 30 minutes
- Extremely short heating-up times
- Call up of heating programs in a matter of seconds

## Secure

- High temperature stability
- Graphically visualized heating curves
- Internal quality control via NANOCOLOR® T-Set

## Ordering information

Description	REF
■ Heating block NANOCOLOR® VARIO 4 with two blocks with separate control, 2 x 12 bores for test tubes of 16 mm OD, incl. power cable, two separate protective coverings, manual, data cable, software DVD and certificate	919 300
■ Heating block NANOCOLOR® VARIO C2 12 bores for test tubes of 16 mm OD, incl. power cable, protective covering, manual, data cable, software DVD and certificate	919 350
■ Heating block NANOCOLOR® VARIO C2 M – version for metal analysis, with large bores – 8 bores for test tubes of 16 mm OD, 2 bores for reaction vessels of 22 mm OD, incl. power cable, protective covering, manual, data cable, software DVD and certificate	919 350.1



# NANOCOLOR® VARIO 4, VARIO C2 and VARIO C2 M

## Technical data

NANOCOLOR® VARIO 4, VARIO C2 and VARIO C2 M	
Type	Heating blocks for chemical-analytical digestions
Number of bores	2 x 12 of 16 mm OD (VARIO 4) 12 of 16 mm OD (VARIO C2) 8 of 16 mm OD + 2 of 22 mm OD (VARIO C2 M)
Display	Colored, backlit LCD touch screen
Operation	Icon-based menu guidance via touch screen
Temperatures	6 preprogrammed temperatures 70 °C / 100 °C / 120 °C / 148 °C / 150 °C / 160 °C 6 free memory locations for individual temperature settings
Temperature range	40 °C–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	5 preprogrammed heating times 10 min / 30 min / 60 min / 120 min / cont. 7 free memory locations for individual heating times
Time range	0 h:01 min–9 h:59 min (1 °C increments)
Safety	Replaceable safety covers as contact protection Lockable protective lids Overheating protection
Interfaces	Bidirectional serial RS232, USB A (function) and USB B (Host)
Internal quality control (IQC)	With NANOCOLOR® T-Set (REF 919 917) and NANOCOLOR® USB T-Set (REF 919 921) Optional fully automatic calibration and generation of a test certificate for instrument control and monitoring
Languages	DE / EN / FR / ES / HU / PL / CZ / TR / DK
Update	Free via Internet / PC and USB stick
Operating range	10 °C–40 °C; max. 80 % relative humidity (non-condensing)
Power supply	110 V–230 V~, 50 / 60 Hz
Power consumption	300 / 550 W (VARIO 4) 150 / 300 W (VARIO C2 and VARIO C2 M)
Dimensions	290 mm x 287 mm x 146 mm (VARIO 4) 169 mm x 282 mm x 146 mm (VARIO C2 and VARIO C2 M)
Weight	approx. 3.2 kg (VARIO 4) approx. 2.0 kg (VARIO C2 and VARIO C2 M)
Warranty	2 years
CE	CE certified

