

CW2110 Colorimeter for Hydrazine

● Operation



Switch the unit on using the ON/OFF switch

Hyd

The display shows the following:

Fill a clean vial with the water sample up to the 10 ml mark, replace the cap tightly, and place the vial in the sample chamber with the ∇ vial marking aligned with the Δ housing marking.



Press the ZERO/TEST key.

METHOD

The method symbol flashes for approx. 3 seconds.

0.0.0

The display shows the following:

After zero calibration is completed, remove the vial from the sample chamber.

The characteristic coloration starts to appear after the addition of the reagent tablet(s).

Replace the cap tightly and place the vial in the sample chamber with the ∇ and Δ symbols aligned.



Press the ZERO/TEST key.

METHOD

The method symbol flashes for approx. 3 seconds.

RESULT

The result appears in the display.

Repeating the analysis:

Press the ZERO/TEST key once again.

New zero calibration:

Press the MODE key until the desired method symbol appears in the display again.

● User messages

EOI

Light absorption too great. Reason - e.g. soiled lens.

+Err

Measuring range exceeded or excessive turbidity.

-Err

Result outside bottom measuring range limit.

LO BAT

Replace 9 V battery immediately; no further analysis possible.

● Technical data

Optics:	LED: $\lambda = 470$ nm (filter)
Battery:	9 V block battery (life = approx. 600 tests)
Auto-OFF:	auto unit switch-off approx. 15 minutes after a key was last pressed
Ambient conditions:	5-40°C 30-90% rel. humidity (non-condensing)
CE:	DIN EN 55 022, 61 000-4-2, 61 000-4-8, 50 082-2, 50 081-1, DIN V ENV 50 140, 50 204

● Hydrazine (0,05-0,5 mg/l)

0.0.0

Perform zero calibration (see "Operation").
Add 1 g of hydrazine test powder to the 10 ml water sample and dissolve using a clean stirring rod.

Wait for a colour reaction time of 10 minutes!

The slight turbidity occurring when the reagent is added is removed by renewed filtration. Replace the cap tightly and place the vial in the sample chamber with the Δ and ∇ marks aligned.

**Zero Test**

Press the ZERO/TEST key.

Hyd

The method symbol flashes for approx. 3 seconds.

RESULT

The result is shown in the display in mg/N₂H₄.

Tolerance: $\pm 0,05$ mg/l N₂H₄

● No



1. If the water sample is cloudy, you must filter it before performing zero calibration.
2. The sample temperature should not exceed 21°C.
3. In order to check whether the reagent has aged (if it has been in storage for a lengthy period), perform the test as described above using tap water. If the result is above the detection limit of 0.05 mg/l, you should only use the reagent with reservations (major result deviation).

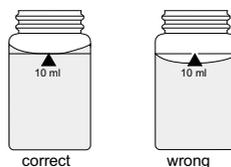
● Method notes

Observe application options, analysis regulations and matrix effects of methods. Reagents are designed for use in chemical analysis only and should be kept well out of the reach of children.

If necessary, request safety data sheets.

Ensure proper disposal of reagent solutions.

● Correct filling of the vial



● Troubleshooting: Guidelines for photometric measurements

1. Vials, caps and stirring rods should be cleaned thoroughly after each analysis to prevent errors being carried over. Use the brush provided for cleaning.
2. The outside of the vial must be clean and dry before starting the analysis. Clean the outside of the vials with a towel. Fingerprints or other marks will be removed.
3. Zero calibration and test must be carried out with the same vial as there may be slight differences in optical performance between vials.
4. The vials must be positioned in the sample chamber for zero calibration and test with the Δ -mark on the vial aligned with the ∇ -mark on the instrument.
5. Bubbles on the inside of the vial may also lead to errors. In this case, fit the vial with a clean stopper and remove bubbles by swirling the contents before starting test.
6. Avoid spillage of water in the sample chamber. If water should leak into the photometer housing, it can damage electronic components and cause corrosion.
7. Soiling of the lens (LED and photosensor) in the sample chamber leads to incorrect measurements.
Check - and if necessary clean - the light entry surfaces of the sample chamber at regular intervals. Clean using a moist cloth and cotton buds.
8. Always add the reagent tablets to the water sample straight from the foil without touching them with your fingers.
9. Large temperature differentials between the photometer and the operating environment can lead to incorrect measurement due to, for example, the formation of condensate in the area of the lens or on the vial.
10. To avoid errors caused by stray-light do not use the instrument in bright sunlight.

- Replacement Reagents
Hydrazine test powder 30g
Ref: TT/46.29.10

● Calibration mode

Mode Press MODE key and hold depressed .

Power Switch unit on using ON/OFF key. Release MODE key after approx. 1 second.

CAL The following messages appear in the display in alternating mode:
Hyd

Zero Test Perform zero calibration as described. Press the ZERO/TEST key.

METHOD The method symbol flashes for approx. 3 seconds.

0.0.0 The following messages appear in the display in alternating mode:
CAL

Zero Test Place the standard to be used in the sample chamber with ∇ and Δ alignment. Press the ZERO/TEST key.

METHOD The method symbol flashes for approx. 3 seconds.

RESULT The result is shown in alternating mode with CAL.
CAL

If the result corresponds to the value of the standard used (within the allowed tolerance), exit calibration mode by pressing the ON/OFF key.

Mode Pressing the MODE key once increases the displayed result by 1 digit.

Zero Test Pressing the ZERO/TEST key once decreases the displayed result by 1 digit.

CAL Continue pressing the keys until the displayed result corresponds to the value of the standard used.
RESULT + x

Power If you press the ON/OFF key, the new correction factor is calculated and stored on the user calibration level.

: Confirmation of calibration (3 seconds).

● Note

CAL Factory calibration active.

cAL Calibration has been effected by the user.

● Recommended calibration value

Hydrazine: between 0,2 and 0,4 mg/l NH_4

- User calibration : cAL
- Factory calibration : CAL

The unit can be reset to delivery condition (factory calibration) as follows:

Mode **Zero Test** Press MODE and ZERO/TEST together and hold depressed .

Power Switch the unit on using the ON/OFF key. Release MODE and ZERO/TEST keys after approx. 1 second.

The following messages appear in the display in alternating mode:

SEL The unit is in delivery condition.
CAL (SEL stands for Select)

or:

SEL The unit operates with a calibration performed by the user. (If the user calibration is to be retained, switch the unit off using the ON/OFF key.)
cAL

Mode Factory calibration is activated by pressing the MODE key. The following messages appear in alternating mode in the display:

SEL
CAL

Power Switch the unit off using the ON/OFF key.

● User messages

E 10 Calibration factor "out of range"
E 70 Factory calibration not OK / deleted
E 71 User calibration not OK / deleted



Camlab Water CW2060 Hydrazine Colorimeter

Reference CW/20.73.00



Choice, Service and Trust
camlab

Camlab Limited , Camlab House, Norman Way, Over
Cambridge CB4 5WE

Tel: 01954 233110 • Fax: 01954 233101

www.camlab.co.uk