



AQUA-CHECK

Digital photometer for precise water values

Please read operating instructions first!
Do not throw operating instructions away!

Söll GmbH • Fuhrmannstraße 6 • 95030 Hof, Germany
www.aqua-check.de



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1. CE Declaration of Conformity

EG-Konformitätserklärung

Dokument-Nr./Monat.Jahr: 01/10.2011

Für das nachfolgend bezeichnete Erzeugnis

(Bezeichnung, Modellnummer)	Photometer Messgerät zur Wasseranalyse Aqua-Check Art.-Nr. 15165 Seriennr. ab IL-00001
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wird hiermit erklärt, dass es den wesentlichen Schutzanforderungen entspricht, die in den nachfolgend bezeichneten Richtlinien festgelegt sind:

RICHTLINIE 2004/108/EG DES EUROPÄISCHEN PARLAMENTS UND DES RATES vom 15. Dezember 2004 zur Angleichung der Rechtsvorschriften der Mitgliedstaaten über die elektromagnetische Verträglichkeit und zur Aufhebung der Richtlinie 89/336/EWG – kurz: EMV-Richtlinie

Das Gerät entspricht den Anforderungen folgender Normen
DIN EN 61010-1(07/2011) und DIN EN 61326-1 (10/2006 inkl. 2. Berichtigung 04/2011)

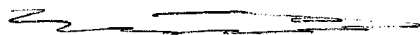
Diese Erklärung gilt für alle Exemplare, die nach den entsprechenden Fertigungszeichnungen - die Bestandteil der technischen Dokumentation sind – hergestellt werden.

Diese Erklärung wird verantwortlich für den Hersteller abgegeben durch

Name:	Thomas Willuweit
Anschrift:	Söll GmbH, Fuhrmannstraße 6, D-95030 Hof
Stellung im Betrieb des Herstellers:	Geschäftsführer

Hof / 17.10.2011

Ort/Datum



Rechtsgültige Unterschrift

2. General

AQUA-CHECK is a highly sensitive photometer for the precise determination of substance concentrations in water and is used in the following areas:

- Aquariums and ponds
- Fish breeding and aqua cultures
- Swimming pools

Reference reagents for photometric measurements are required for this, and can be bought in retail outlets.

Please always wear safety glasses (normal glasses are not safety glasses, as they are open at the side) when using the respective reagents.



Read these operating instructions carefully before you use.



Please observe the usual safety precautions when handling chemicals. Use of the photometer with reagents (chemicals) is not permitted for people under 16 years. Please also ensure that the photometer is not accessible for children under 3 years, as it contains small parts that could be swallowed.



The measurement device is spray water protected. Only immerse the measurement component (measuring tube) into the water. Do not immerse the device (apart for the measuring tube) into or under water.

2.1 Proper intended use

The **AQUA-CHECK** Photometer is **ONLY** used for determining 8 parameters, which are present in aqueous solutions and in the temperature range from +5°C to +40°C.

Aqueous solutions are all types of water, such as those in aqua cultures, fresh and sea water aquariums, pond systems and swimming pools. Wrong uses could, for example, include: Non-aqueous mixtures and flammable liquids, use as a tool, temperatures that are too high >40°C.

2.2 Product monitoring

Please inform us if any faults or problems occur when using the Photometer, in particular if they result in any kind of accident.

Write us an e-mail: info@aqua-check.de

2.3 Indicators

There is a selection of indicators suitable for the **AQUA-CHECK** for determining:

NH_4^+ (ammonia), NO_3^- (nitrate), NO_2^- (nitrite), Cl_2 (chlorine), Si (silicon), Cu^{2+} (copper), PO_4^{3-} (phosphate) and pH value.

All indicators are included together in an indicator starter set: NH_4^+ , NO_3^- , NO_2^- , Cl_2 , Si, Cu^{2+} , PO_4^{3-} , pH value, TH, CH.

TH and CH tests are titrimetric tests. These are used without the **AQUA-CHECK** measurement device.

The use of the indicators in connection with the **AQUA-CHECK** is described in the respective instructions of the indicator set.

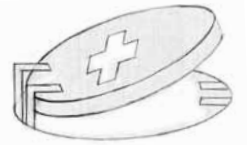
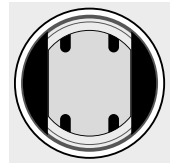
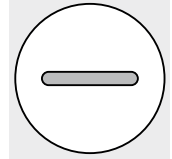
3. Operating

3.1 Battery

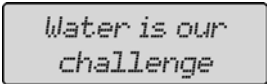
After you have removed the battery from the protective sleeve included, insert it into the battery slot. Open the cover on the rear side of the housing with a coin.

Place the battery with the +- pole up (showing to the opening) into the slot and press it into the battery holder with a rod or suchlike (no metal), until it clicks in.

Then screw the cover back on. You must ensure here that the rubber ring on the opening lies completely in the slot. Any possible water penetration that could destroy the electronics can then be prevented. Then turn the device around and confirm with the **“OK”** button.

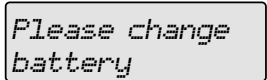


The following appears in the display:



You have inserted the battery properly. If the display does not show any message, the battery has been inserted incorrectly or the battery is discharged.

If the battery is discharged, the following message appears: **“Please change battery”**.



Only use CR 2032 batteries; others can cause faults.

3.2 Preparing measurement

You require two test tubes to measure a parameter. Both test tubes are vertical and are filled to the mark with test water. The difference between reference tubes and measuring tubes is important in the following.

The recesses/holes in the measuring device's delivered packaging are suitable for firm and steady storage.

If indicators are used or the measurement, you perform the actions in acc. with the indicator instructions before the measurement. Please ensure here that you wear safety glasses and observe the safety notes for handling hazardous substances.



3.3 Operating

Button for switching on and off.

You switch between the individual parameters by pressing the **“Select”** button.

The order is as follows: Ammonia, nitrite, nitrate, phosphate, copper, silicon, chlorine, pH value.

Pressing the **“OK”** button again confirms the selected test.

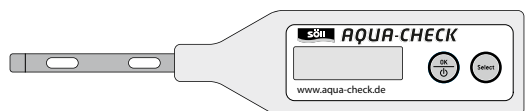
After selecting and confirming the parameter to be measured, the device automatically determines the length of the measuring tube.

With the **“Please extend measuring tube!”** message the measuring tube must be carefully pulled out by hand until it engages.

Pulling out further would destroy the measurement device!

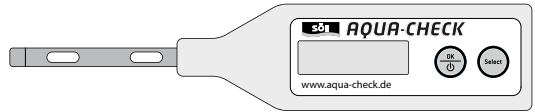


Please extend
measuring tube!



With the **“Please slide in measuring tube!”** message you push the measuring tube in carefully with your hand until it stops.

*Please slide in
measuring tube!*



Ensure that there is nothing stuck in the measurement openings. This could damage the optics.

“Ready for reference” appears when the measuring tube is in the right position.

*Ready for
reference*

To homogenize the test water for the measurement and to prevent air bubbles from forming on the lens, insert the measuring tube into the reference tube (tube 1) and stir the liquid lightly.

Pressing the **“OK”** button starts the measurement process again.

The 3 seconds wait time is announced with the **“Please wait ...”** prompt, which appears on the

*Please wait ...
>>>>*

“Ready for measurement” display.

*Ready for
measurement*

To homogenize the test water and the respective indicator for the measurement and to prevent air bubbles from forming on the lens, insert the measuring tube into the test tube (tube 2) and stir the liquid lightly.

Pressing the “OK” button again starts the measurement process.

Please wait ...
>>>>>

The measured value is shown after three seconds.

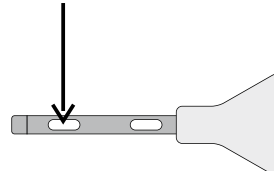
Nitrite (NO₂)
0,8mg/l

3.4 Cleaning after the measurement

You should rinse the measurement components and the lenses in particular with distilled water after every measurement. The lens can, if required, also be cleaned with a fuzz-free cloth or a cotton bud.

No components must be removed for cleaning.

Insert the cotton bud on the side through the cut-outs of the measuring tube and rub the lens clean on the bottom without applying pressure. The end of the transparent rod can also be cleaned.



3.5 Switching the device off

If the “OK” button is pressed longer than 3 seconds, the device switches off completely and measurements already made are lost.

Automatic device switch-off

If the device is not used for 6 minutes, it switches off automatically. Measured values are lost!

3.6 Removing faults

Fault	Action
No message in the display	Renew battery
No display message despite charged battery	Send device to Söll GmbH for check
Measuring tube cannot be pulled out or pushed in	Send device to Söll GmbH for check
Display shows " Device error "	Send device to Söll GmbH for check
Display shows " Device error " after switching on with pulled out measuring tube	Please switch off device, push in measuring tube and switch on device again

If you cannot fix the fault yourself, contact Söll GmbH directly. Repairs should essentially only be carried out by Söll GmbH. Please remember that improper repairs also nullify your warranty and may incur additional costs.

3.7 Cleaning

Clean the device with a fuzz-free cloth or cotton bud and water. Do not use any scouring household cleaning agents or solvents, as these will destroy the device. Ensure that the measuring optics are always clean. Residue can cause measuring errors.

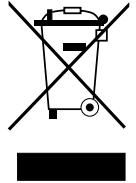
3.8 Disposal

AQUA-CHECK and the battery included do not belong in household waste!

AQUA-CHECK is an electronic product. For disposal you can return it to Söll GmbH or give it to your local waste disposal provider (electrical scrap).

Batteries supplied can be returned as required to Söll GmbH or given to the local waste disposal provider. You are legally obliged to dispose of the battery properly. Batteries must only be given to collection points when they are discharged. If the battery is not fully discharged, precaution must be taken against short circuits.

Suggestion: Short circuits can be prevented by insulating the poles with adhesive tape.



4. Warranty

The legal warranty as of the purchase date applies for the **AQUA-CHECK** Photometer. Please always include the receipt of purchase with all returns.

The warranty no longer applies if the device is opened.

5. Appendix

Packaging content:

- **AQUA-CHECK** Photometer CR 2032 3V button cell and hand strap
- 1 measuring tube with gauge mark
- Packaging (serves as mini lab for inserting the measuring tube)
- Operating instructions

Attached to the device are: CE, ROHS, WEEE symbols.

Every device is subjected to a referencing with a standard substance.

AQUA-CHECK

Dealer's stamp/signature:

<p>Purchase date: _____</p>

Address:

Söll GmbH • Fuhrmannstraße 6 • 95030 Hof, Germany

Söll hotline: 0 700/92773755

(14 cents/minute from a German landline)

www.aqua-check.de

Patent / EU design patent:

Patent no. DE10 2009 025 261

EU design patent: 001856089-0001