

AE86061 多功能水质检测仪

中英文使用说明书



Water Quality Meter

引言

- 感谢您购买本公司生产的多功能水质检测仪。
- 本手册仅提供本产品的相关测量功能的使用方法以及使用方面的注意事项,要发挥本产品的最佳使用效能,使用前请详阅本手册,并妥善保管本手册以便不时之需。
- 当您收到此产品时请检查仪器是否完好,配件是否齐全,如有缺失或是其它任何问题请您尽快与供应商联系。

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产品参数

型号: AE86061

测量项目	溶氧	酸碱度/PH	亚硝酸盐	氨氮
测量范围	0~30.0mg/L	3.5~11.0	0~1.00mg/L	0~8.00mg/L
分辨率	0.1mg/L	0.1	0.01	0.01
测量精度	±3.0%满量程	±0.2	±5%or ±0.01mg/L	±5%or ±0.01mg/L
试剂用量	/	2滴	1平勺	试剂1:3滴 试剂2:3滴
反应时间	/	5s	2min	1min
特殊功能	/	/	/	配合测的PH值可以计算出有毒氨

饱和氧校正 空气中100%饱和氧校正(仅溶解氧)

温度测量范围 0.0~50℃(需接溶氧探头)

温度分辨率 0.1℃

温度精度 ±0.5℃

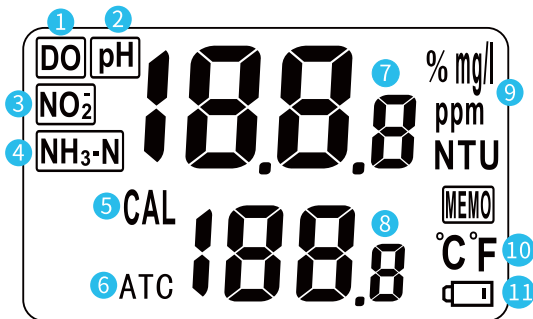
工作环境 0~50℃;0~80%RH

存储环境 0~60℃;0~90%RH

温度单位切换	℃/°F切换
记录数据	手动记录99笔
盐度补偿	0~42ppt
海拔补偿	0~3500m
自动温度补偿ATC	支持
自动关机	无操作1小时
LCD尺寸	27*45mm
背光	支持
探头线长	约3.5m (加探头)
供电	AAA*4pcs
产品尺寸	70*30*169mm

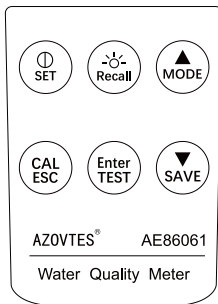
产品标配 仪器、DO测棒、膜套*1包、PH试剂(可用约80次)、亚硝粉剂(可用约80次)、氨氮试剂1、2、测量瓶、5ml针筒、过滤器*2、量杯(50ml)、带嘴量杯(100ml)、棉签、说明书、合格证、手提箱

屏幕面板说明



1. “DO”测量模式
2. “PH”测量模式
3. “亚硝酸盐”测量模式
4. “氨氮/有毒氨”测量模式
5. “CAL”校正模式
6. “ATC”自动温度补偿模式
7. 当前读数
8. 当前温度读数
9. 含量单位
10. 温度单位
11. 低电量提示, 请更换电池以保证测量的准确性

按键介绍



ⓘ/SET键:短按开关机/长按进入设定模式

CAL/ESC键:测量模式下长按进入校正模式/设定模式下短按退出设定模式

☀-/Recall键:短按开启或关闭背光灯/长按查看已保存的数据,按上下键可以逐条查看记录数据,按ESC键可退出记录查看模式。

▲/Mode键:设定向上调整键/模式切换

▼/Save键:设定向下调整键/测量模式下短按可手动保存数据(最高99笔)

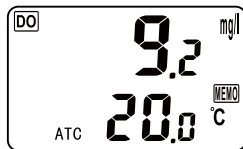
Enter/TEST键:测试键,确认键

饱和氧校正

- 1.接好溶氧探头，按“ O/SET ”键开机。
- 2.校正时要在百分比“%”模式下，按“ $\blacktriangle/\text{Mode}$ ”键可以切换。



(百分比模式)



(毫克/升模式)

- 3.把探头放在空气中等测量值稳定，大概需要**5分钟**。
- 4.长按“ CAL/ESC ”键大于1秒进入校正，等待几分钟后自动完成校正或手动按“ Enter/TEST ”键完成校正。校正完成显示99.5%~100.5%为正常，超出该数值则需重新校正。



(校正界面)

- 5.按“ $\blacktriangle/\text{Mode}$ ”键切换到毫克/升“ mg/L ”单位，就可以开始测量了。

设定

1. P10删除保存数据: 测量模式下, 长按“ D/SET ”键进入设定模式P10, 按“ Enter/TEST ”键到P11, 按“ $\blacktriangle/\text{Mode}$ ”或“ $\blacktriangledown/\text{Save}$ ”键出现“YES”字样, 按“ Enter/TEST ”键删除保存数据并回到P10。

2. P70溶解氧参数: 在设定模式P10, 按“ $\blacktriangle/\text{Mode}$ ”或“ $\blacktriangledown/\text{Save}$ ”键切换到P70,

- a) 按“ Enter/TEST ”键进入P71溶解氧校正时的温度值, 实际测量时的温度值与校正时的温度值之差大于 10°C 时, 测量时会出现“E21”提示;
- b) 按“ Enter/TEST ”键到P72盐度补偿, 按“ $\blacktriangle/\text{Mode}$ ”或“ $\blacktriangledown/\text{Save}$ ”键调整到实际盐度(淡水为 0.0ppt), 按“ Enter/TEST ”键保存。
- c) 按“ Enter/TEST ”键到P73海拔补偿, 按“ $\blacktriangle/\text{Mode}$ ”或“ $\blacktriangledown/\text{Save}$ ”键调整到实际地点的海拔高度(百米的倍数), 按“ Enter/TEST ”键保存;

3. P80切换温度单位: 在设定模式P10, 按“ $\blacktriangle/\text{Mode}$ ”或“ $\blacktriangledown/\text{Save}$ ”键切换到P80, 按“ Enter/TEST ”键进入P81再按“ $\blacktriangle/\text{Mode}$ ”或“ $\blacktriangledown/\text{Save}$ ”键切换 $^{\circ}\text{C}/^{\circ}\text{F}$ 单位, 按“ Enter/TEST ”键保存, 最后按“ CAL/ESC ”回到测量模式。

溶氧测量

- 1.如果要测量海水，需手动设置盐度补偿，设置完以后就开始测量。
- 2.将测棒头放到待测水层深度(测棒头不能碰到池底)，测棒要来回摆动，2~3分钟后数值稳定，即可记录测量数据。
- 3.按“↵/Recall”键开关背光，1小时无操作自动关机；要取消自动关机，则在关机状态下同时长按“ⓘ/SET”+“▲/Mode”键开机，直到显示“n”字样则仪器自动关机解除。
- 4.测量模式下，按“▼/Save”保存当前数据，长按“↵/Recall”键查看保存数据，按“▲/Mode”或“▼/Save”键翻看保存的数据，按“CAL/ESC”键退回测量模式。
- 5.每次测量完要用清水冲洗，确保膜顶端干净。

注意事项

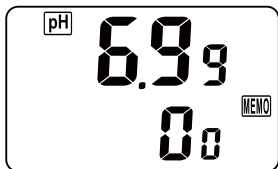
- 1.测量时手只能抓在测量瓶上的塑胶壳上,不能抓到玻璃部位。
- 2.测量瓶上不能沾水,如果沾水要用餐巾纸擦干净!
- 3.避免太阳光直射仪表,要遮挡太阳光
- 4.酸碱度/PH测量跟滴剂滴数关系很大,一定保证滴入玻璃瓶的滴数是2滴。**警告:不可食用,不可接触眼睛,远离儿童。**
- 5.试剂的瓶盖记得盖回并且拧紧,以避免试剂因为和空气中长时间接触而失效。
- 6.测量瓶中如果有沉淀物,油垢等等污染物附着着,需要用棉签擦拭干净,以保证测量的准确性。
- 7.测量后测量用清水清洗干净甩干保存。
- 8.试剂避光常温保存,保质期12个月。

注:如果选错了参数,可以退出测量,选对参数再测。

试剂/测量	PH测量	亚硝酸盐测量	氨氮测量
酸碱度PH检测试剂	2滴/次	/	/
亚硝酸盐NO ₂ ⁻ 检测试剂	/	1平勺	/
氨氮NH ₃ -N检测试剂1	/	/	3滴/次
氨氮NH ₃ -N检测试剂2	/	/	3滴/次

酸碱度/PH测量

1.将取水器（旋在测棒上，也可以取下取水器，放到待测的水层深度（一般水下0.5米）取水，倒入50ml的烧杯中（或自备的矿泉水空瓶中）。



（酸碱度测量界面）

2.按“ $\odot$ /SET”键开机后短按“ $\blacktriangle$ /Mode”键切换测量参数,当屏幕上出现PH标志,则表示目前选择的测量模式是酸碱度/PH测量,当前显示的是上次测量的数据。

3.如果更换了测试水样,需用针筒抽取2ml左右水样,旋上过滤后将针筒中水样射出,该步骤是为了保证过滤器内是新的水样。用针筒抽测量水样5ml以上,装上过滤器,注入5ml到测量瓶中(水量不能低于5ml刻度线)。

4.往测试瓶中滴入2滴水质酸碱度PH检测试剂,盖紧瓶盖,摇晃10秒按正确的方向放入到测量孔中。

5.按“Enter/TEST”键开始测量,待屏幕上倒计时结束后显示测量结果。测量过程中按“CAL/ESC”可以退出测量。

亚硝酸盐测量

1.将取水器 旋在测棒上，放到待测的水层深度（一般水下0.5米）取水，倒入50ml的烧杯中（或自备的矿泉水空瓶中）。



（亚硝酸盐测量界面）

2.按“ $\odot$ /SET”键开机后短按“ $\blacktriangle$ /Mode”键切换测量参数，当屏幕上出现NO₂-标志，则表示目前选择的测量模式是亚硝酸盐测量，当前显示的是上次测量的数据。

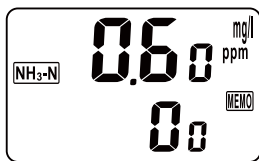
3.如果更换了测试水样，需用针筒抽取2ml左右水样，旋上过滤后将针筒中水样射出，该步骤是为了保证过滤器内是新的水样。用针筒抽测量水样5ml以上，装上过滤器，注入5ml到测量瓶中（水量不能低于5ml刻度线）。

4.舀一平勺水质亚硝酸盐NO₂检测试剂倒入测量瓶中，盖紧瓶盖，摇晃10秒，按正确方向放入测量孔中。

5.按“Enter/TEST”键开始测量，待屏幕上倒计时2分钟结束后显示测量结果。测量过程中按“CAL/ESC”可以退出测量。

氨氮(有毒氨)测量

1.将取水器(旋在测棒上,也可以取下取水器,单独使用),放到待测的水层深度(一般水下0.5米)取水,倒入50ml的烧杯中(或自备的矿泉水空瓶中)。



(氨氮测量界面)

2.按“①/SET”键开机后短按“▲/Mode”键切换测量参数,当屏幕上出现NH₃-N标志,则表示目前选择的测量模式是氨氮测量,当前显示的是上次测量的数据。

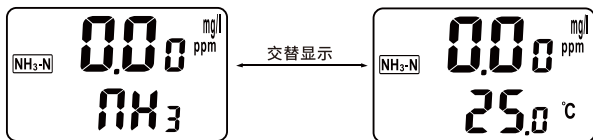
3.如果更换了测试水样,需用针筒抽取2ml左右水样,旋上过滤后将针筒中水样射出,该步骤是为了保证过滤器内是新的水样。用针筒抽测量水样5ml以上,装上过滤器,注入5ml到测量瓶中(水量不能低于5ml刻度线)。

4.往测量瓶中滴入3滴水质氨氮NH₃-N检测试剂1,盖紧瓶盖,摇晃10秒,打开瓶盖,再滴入3滴水质NH₃-N检测试剂2,盖紧瓶盖,摇晃10秒,按正确方向放入测量孔中。

5.按“Enter/TEST”键开始测量,待屏幕上倒计时1分钟结束后显示测量结果。测量过程中按“CAL/ESC”可以退出测量。

6.有毒氨(非离子态氨)计算:

a) 在氨氮测量模式下, 长按“CAL/ESC”键大于1秒仪表进入有毒氨计算模式, 此时屏幕上测量数值显示的是有毒氨浓度(非离子态氨) 这才是对鱼虾蟹类真正有毒, 一般不超过**0.02mg/L (ppm)**。底层数字8交替显示“NH₃”和温度, 按“▲/Mode”和“▼/Save”键调整到当前水温(温度需要手动调整), 这样算出有毒氨(非离子态氨)更准确。

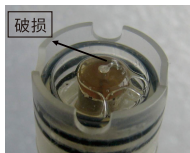


b) 再次短按“CAL/ESC”键退出有毒氨计算模式, 仪表退回氨氮显示模式。

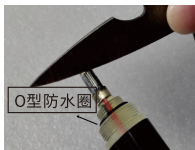
更换膜套

1.出现如下情况之一则需要更换膜套:

- 1) 使用时间长达1年以上;
- 2) 校正时出现E02或E03报错信息,可以更换膜套后试机;
- 3) 膜套的膜有松动、褶皱或破损时(图1,顶端膜有明显破损);
- 4) 测量数据明显异常,或响应速度明显变慢,可以更换膜套后试机;



(图1)



(图2)



(图3)

2.更换膜套步骤:

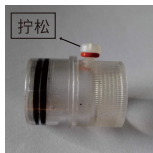
- 1) 旋下膜套,如果O形橡胶圈开裂、老化,则更换新O形橡胶圈;
- 2) 用剪刀刮干净金属管上沉积物(图2),**千万不能刮到顶端!!!**清洗后如(图3)。顶端如有污垢则用指甲抠干净 (**千万不能用剪刀等硬物刮!;**);
- 3) 用纸巾擦干电极,用砂纸轻轻打磨顶端(图4),用纯净水冲洗电极,反复冲洗干净,然后轻轻甩干(图5);



(图4)



(图5)



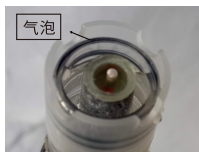
(图6)

4) **确认旋松塑料螺丝**(图6), 确定新膜套内没有杂物, 然后倒放在纱布上, 慢慢倒满电解液(图7), 尽量不要有气泡, 如出现气泡或发现杂物重新倒电解液;

5) 测棒头垂直朝下, 慢慢旋紧膜套, 确定O形橡胶圈被压紧, 膜套只能慢慢被旋紧, 旋紧后如果出现小气泡(图8), 用注射器加满电解液(图9), **最后旋紧塑料螺丝**;



(图7)



(图8)



(图9)

故障代码

- 1) E02:测量值超出下限;
- 2) E03:测量值超出上限;
- 3) E04:测量温度错误;
- 4) E21:校正时的温度与测量时的温度
 相差大于10℃, 重新校正即可;
- 5) E31:硬件问题, 需要维修;

使用常见问题

1. 错误操作: **从来不清洗测棒。**

每天测量结束后, **一定要用清水(如自来水)清洗测棒头**, 冲洗或漂洗掉泥浆、有机碎屑、藻类等附着物;



长期不清理
测量数据不稳定



2. 拧开测量试剂瓶盖时, 注意拧动的是蓝/红色瓶盖而不是白色瓶脖。

3. 过滤器使用一段时间后, 污垢会在过滤器中堆积, 需要对过滤器进行反向清洗, 将过滤器旋上针筒后, 抽取5ml纯净水, 旋下过滤器后将水排除, 重复几次。

4. **测量水需要用过滤器过滤!** 水中有有机碎屑等物质, 不将其过滤会影响到测量精度。

5. **测量瓶外表面不能有水需保持干燥!** 外表面有水的话, 一定要用餐巾纸擦拭干净, 否则会影响测量精度。

6. **加入测量试剂后一定要摇晃均匀!** 否则会影响测量精度。

7. 长时间不使用的話, 请把电池取出来, 将探头清洗干净晾干, 常温避光保存, **否则会影响仪器正常使用!**

特殊声明

- 1.旧电池必须按照地方法律和规定处理。
- 2.本公司保留对本产品设计规格即说明书内容更新,修改权利,若有变动恕不另行通知!

警告:电解液,测试试剂等不能食用!要放置在儿童接触不到的地方。

保修事项

- 1.本产品自购买日起,在正常使用未经拆装,维修或第三方因素的损坏下一年内享受保修服务,在任何正常情况下均提供维修。
- 2.上述保修条款只对主机有效,探头配件等耗材不在保修范围内。

PRODUCT SPECIFICATION

Model No: AE86061

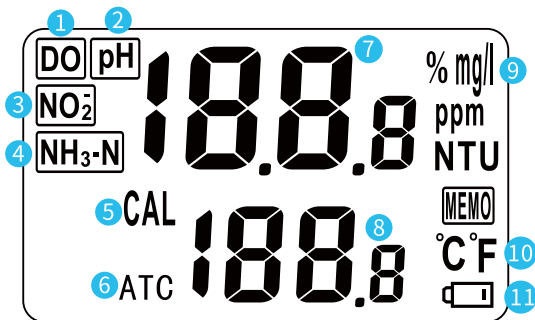
Measurement items	DO	pH	Nitrite	Ammonia nitrogen
Measuring range	0~30.0mg/L	3.5~11.0	0~1.00mg/L	0~8.00mg/L
Resolution	0.1mg/L	0.1	0.01	0.01
Accuracy	$\pm 3.0\%FS$	± 0.2	$\pm 5\%$ or $\pm 0.01mg/L$	$\pm 5\%$ or $\pm 0.01mg/L$
Reagent dosage	/	2Drops	1spoon	Dropper No1:3Drops Dropper No2:3Drops
Measuring period	/	5s	2min	1min
Sepecial Function	/	/	/	With the measured pH value, toxic ammonia (non-ionic ammonia) can be calculated

Calibration 100%in Air(onlyDO)

Measuring range	0.0~50°C (need Connected to DO probe)
Resolution	0.1°C
Accuracy	$\pm 0.5^{\circ}C$
Working environment	0~50°C; 0~80%RH
Storage environment	0~60°C; 0~90%RH

Unit	°C/°F
Records	99points
Salinity compensation	0~42ppt
Altitude compensation	0~3500m
Auto temperature compensation ATC	YES
Automatic shutdown function	There is no button operation for half an hour
LCD size	27*45mm
Backlight	YES
Cable length	Around 3.5 meters (including the probe)
Power	AAA*4pcs
Size	70*30*169mm
Accessories	Instrument/DO measuring rod/membrane sleeve * 1 package PH reagent (Available for about 80 times) /nitrite powder/ ammonia, nitrogen reagent 1, 2 (Available for about 80 times) / Measuring bottle/5ml syringe/filter * 2/measuring cup (50ml)Measuring cup with nozzle (100ml)cotton swab instructions/certificate/suitcase

Panel description



1. "DO" indication
2. "PH" indication
3. "NO₂⁻" indication
4. "Ammonia nitrogen" indication
5. "CAL" means calibration
6. "ATC" means automatic temperature compensation
7. Measurement value
8. Current temperature reading
9. Content unit
10. Temperature unit
11. Low battery warning, please replace the battery to

Setting

1. **P10-Deleting data**: while in measuring mode, press “⓪/SET” more than 1 second to enter Setting mode P10, press “Enter/TEST” to enter to P11, press “▲/Mode” or “▼/Save” to until “YES” appears, then press “Enter” to delete the saving data and return to P10.

Tips: In the measurement mode, which parameter is measured, after entering the setting mode, the saved data of which parameter is deleted

2. **P70 Dissolved oxygen parameter**: while in P10, press “▲/Mode” or “▼/Save” to switch to P70,

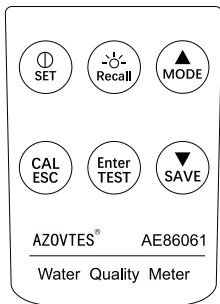
a) Press the "Enter/TEST" key to enter the temperature value for P71 dissolved oxygen correction and the temperature for actual measurement. When the difference between the value and the temperature value during correction is greater than 10 °C, "E21" prompt will appear during measurement;

b) press “Enter/TEST” to switch to P72-saltinity compensation, press “▲/Mode” or “▼/Save” to adjust salinity value, press “Enter/TEST” to save the setting.

c) press “Enter/TEST” to switch to P73-Altitude, press “▲/Mode” or “▼/Save” to adjust the altitude of the calibration site (Multiple of 100 meters), press “Enter/TEST” to save.

3. **P80 Switching temperature units**: while in P10, press “▲/Mode” or “▼/Save” to switch to P80, press “Enter” to switch to P81, press “▲/Mode” or “▼/Save” to select °C or °F, press “Enter/TEST” to save the setting. Finally, press “CAL/ESC” to return to the measurement mode.

Key introduction



ⓘ/SETkey: Short press to turn on/off; press > 1s in measurement mode to enter setting mode.

CAL/ESC key: press > 1s in measurement mode to enter calibration mode; Short press in setting mode to exit setting mode

☼/Recallkey: Short press to turn on or off the backlight; press > 1s to recall the saved data; Press the up and down keys to select the record data one by one; and press the ESC key to exit the record recall mode.

▲/Mode key: Toggling the measurement parameter, the up adjustment key in setting.

▼/Save key: Saving the measurement data, the down adjustment key in setting. “Enter /TEST”: The confirming key, Testing key.

Enter/TEST key: Measuring key, Key to confirm setting and calibration

Calibration

1. press “⓪/SET” to turn on meter;
2. To calibrate in percentage Mode, press the “▲/Mode” key to switch.



(%mode)



(mg/Lmode)

3. Wait about 5 minutes until the measurement data is stable in the air.

4. Press “CAL/ESC” more than 1 second to enter Calibration Mode, press “Enter/TEST” to end the calibration, if the measurement data is out of “99.5~100.5%”, it can be calibrated again.



(Correction interface)

5. Press “▲/Mode” to toggle to mg/l, it's ready to start measuring.

DO Measurement

1. Salinity compensation should be set first in seawater measuring.

2. Place the probe to the depth of the water layer to be measured, the probe should swing back and forth, not stand still, the temperature of the measuring probe and the temperature of the water layer to be measured reach a balance after 2~3 minutes, then the measurement data can be recorded.

3. press “☺/Recall” to turn on/off the backlight, the meter will automatically shut down if there is no button operation for one hour, To cancel the automatic shutdown function, press “⓪/SET”+“▲/Mode” at the same time more than 1 second to turn on the meter while it is off, LCD will display “n” and then the automatic shutdown function is canceled.

4. Rinse with water after each use to make sure the top membrane is clean.

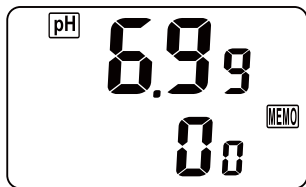
Tips

1. The hand can only grasp the plastic shell of the measuring bottle, not the glass.
 2. The measuring bottle shall not be stained with water.
If it is stained with water, clean it with napkin.
 3. Avoid direct sunlight on the instrument! To block sunlight.
 4. The pH/pH measurement has a great relationship with the number of drops. It must be ensured there are 2 drops dropped into the glass bottle. **Warning: Do not eat, do not touch eyes, and keep away from children**
 5. Keep the cap of the reagent bottle back and tighten it to avoid reagent failure due to long-term contact with air.
 6. If there is sediment, oil dirt and other pollutants attached to the bottle, wipe it with a cotton swab to ensure the accuracy of the measurement.
 7. Pour out the water sample in the measuring bottle after measurement, clean the measuring bottle with clean water (Pour purified water, tap water, etc. into a 100mL beaker), Drain water, tighten the cap.
 8. The reagent shall be stored at room temperature and away from light, with a shelf life of 12 months
- Tips: If you select the wrong measurement parameter, you can cancel the measurement and select the right measurement parameter to measure again.

Reagent measurement	PH measure	Nitrite measure	Ammonia nitrogen measure
PH test reagent	2 drops/time	/	/
Nitrite test reagent	/	1 spoon	/
Ammonia nitrogen detection reagent1	/	/	3 drops/time
Ammonia nitrogen detection reagent2	/	/	3 drops/time

PH Measurement

1. Tie the water sampler to the bamboo pole with a rope, place it at the depth of the water layer to be measured (generally 0.5m below the water surface), and take water, and pour it into a 50mL beaker (or into an empty bottle of mineral water prepared by yourself)



(PH measurement interface)

2. Press the “ $\odot$ /SET” key to turn on the instrument. After the instrument is turned on successfully, the screen will display fully for 3 seconds. After the full display is completed, press the “ $\blacktriangle$ /Mode” key <1S to switch the measurement parameters. When the pH mark appears on the screen, it means that the currently selected measurement mode is pH measurement, Currently displayed is the last measured value.

3. If the test water sample is replaced, it is necessary to take about 2mL of water sample with the syringe, screw on the filter and shoot out the water sample in the syringe. This step is to ensure that there is a new water sample in the filter. Use a syringe to extract more than 5ml of water sample for

measurement, install a filter, and inject 5ml into the measuring bottle (the water volume cannot be lower than the 5ml scale line)

4.Drop 2 drops of pH detection reagent into the test bottle, tighten the bottle cap, shake it for 10 seconds, and put it into the measuring hole in the correct direction.

5.Press the “TEST/Enter” key to start the measurement. Countdown appears at the top of the screen, and the measurement results will be displayed after the countdown. Press “CAL/ESC” key during measurement to cancel measurement.

Nitrite Measurement

1. Tie the water sampler to the bamboo pole with a rope, place it at the depth of the water layer to be measured (generally 0.5m below the water surface), and take water, and pour it into a 50mL beaker (or into an empty bottle of mineral water prepared by yourself)



(Nitrite measurement interface)

2. Press the “ $\odot$ /SET” key to turn on the instrument. After the instrument is turned on successfully, the screen will display fully for 3 seconds. After the full display is completed, press the “ $\blacktriangle$ /Mode” key <1S to switch the measurement parameters. When the NO₂- mark appears on the screen, it means that the currently selected measurement mode is Nitrite measurement. Currently displayed is the last measured value.

3. If the test water sample is replaced, it is necessary to take about 2mL of water sample with the syringe, screw on the filter and shoot out the water sample in the syringe. This step is to ensure that there is a new water sample in the filter. Use a syringe to extract more than 5ml of water sample for measurement, install a filter, and inject 5ml into the measuring bottle (the water volume cannot be lower than the 5ml scale line).

4.Scoop a flat spoon of nitrite detection reagent into the measuring bottle, tighten the bottle cap, shake it for 10 seconds and put it into the measuring hole in the right direction.

5.Press the “TEST/Enter” key to start the measurement. Countdown appears at the top of the screen, and the measurement results will be displayed 30 seconds after the countdown. Press “CAL/ESC” key during measurement to cancel measurement.

Ammonia nitrogen Measurement

1. Tie the water sampler to the bamboo pole with a rope, place it at the depth of the water layer to be measured (generally 0.5m below the water surface), and take water, and pour it into a 50mL beaker (or into an empty bottle of mineral water prepared by yourself)



(Ammonia nitrogen measurement interface)

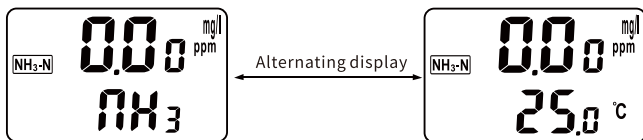
2. Press the "Ⓢ/SET" key to turn on the instrument. After the instrument is turned on successfully, the screen will display fully for 3 seconds. After the full display is completed, press the "▲/Mode" key <1S to switch the measurement parameters. When the NH₃-N mark appears on the screen, it means that the currently selected measurement mode is Ammonia nitrogen measurement, Currently displayed is the last measured value.

3. If the test water sample is replaced, it is necessary to take about 2mL of water sample with the syringe, screw on the filter and shoot out the water sample in the syringe. This step is to ensure that there is a new water sample in the filter. Use a syringe to extract more than 5ml of water sample for measurement, install a filter, and inject 5ml into the measuring bottle (the water volume cannot be lower than the 5ml scale line).

4. Drop three drops of ammonia nitrogen test reagent No.1 into the measuring bottle, tighten the bottle cap, shake it for 10 seconds, open the bottle cap and then drop three drops of ammonia nitrogen test reagent No.2, tighten the bottle cap, shake it for 10 seconds, and put it into the measuring hole in the correct direction.

5. Press the "TEST/Enter" key to start the measurement. Countdown appears at the top of the screen, and the measurement results will be displayed 30 seconds after the countdown. Press "CAL/ESC" key during measurement to cancel measurement.

6. Calculation of toxic ammonia (non-ionic ammonia)



a) In the ammonia nitrogen measurement mode, press the "CAL/ESC" key for more than 1 second to enter the toxic ammonia calculation mode. In this mode, the upper figure 8 on the screen shows the concentration of toxic ammonia (non-ionic ammonia), which is really toxic to fish, shrimp and crabs, and generally cannot exceed **0.02mg/L** (ppm). The bottom number 8 alternately displays "NH₃" and temperature, which is the water temperature of the water layer depth to be measured. Press the "▲/Mode" and "▼/Save" keys to adjust the temperature value as close as possible to the highest water temperature in the day, so that the calculated toxic ammonia (non-ionic ammonia) is more accurate

b) Press the "CAL/ESC" key < 1S again to exit the toxic ammonia calculation mode, and the instrument returns to the ammonia nitrogen display mode.

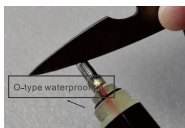
Replacing membrane cover

1.If one of the following situations occurs, the membrane cover needs to be replaced:

- a)The use time is more than 1 year.
- b)If an error message is reported in E02 or E03 during calibration, you can try replacing the membrane cover.
- c)When the membrane of the membrane cover is loose, wrinkled or damaged (Figure 1, The membrane is obviously damaged).



(Figure 1)



(Figure 2)



(Figure 3)

2.Replace the membrane cover process:

1)Unscrew the membrane cover, if O ring is cracked and aging replace it with a new O ring.

2)Scrape the sediment on the metal pipe with scissors (Figure 2), **do not scrape to the top! Clean up.**

3)Dry the electrode with a paper towel, sand the top lightly with sandpaper (Figure 4), rinse the electrode with bottled water, rinse repeatedly, and then gently shake dry (Figure 5).

4)Confirm to Unscrew the plastic screw (Figure 6), make sure that there is no debris in the new membrane cover, then put it on the gauze upside down, slowly fill with the electrolyte, as far as possible do not have bubbles, such as bubbles or debris found to pour the electrolyte again.



(Figure 4)



(Figure 5)



(Figure 6)

5) With the measuring rod head facing vertically down, slowly tighten the membrane cover to ensure that the O ring is compressed, and the membrane cover can only be tightened slowly. If there are small bubbles after tightening, fill the electrolyte with the syringe, and finally tighten the plastic screw.

6) 1 hour later, calibrating the meter, it's ready to start measuring.



(Figure 7)



(Figure 8)



(Figure 9)

Error message

- 1) E02: Measurement data is under the lower limit;
- 2) E03: Measurement data is over the upper limit;
- 3) E04: Temperature measurement is error;
- 4) E21: The difference between the temperature at calibration and the current temperature is greater than 10°C;
- 5) E31: Hardware failure;

Common problems

1. Never clean the probe: **Rinse with water after each use to make sure the top fluorescent membrane is clean;**
- 2: When unscrewing the cap of the measuring reagent bottle, it should be noted that the blue or red cap is screwed instead of the white neck.



Long term uncleaning
and unstable
measurement data



3. After the filter is used for a period of time, the dirt will accumulate in the filter. It is necessary to reverse clean the filter. After screwing the filter onto the syringe, extract 5mL of pure water. After screwing off the filter, remove the water and repeat several times.

4: It is wrong that the measured water is not filtered with a filter! There are organic debris and other substances in the measuring water, and the measurement accuracy will be affected if they are not filtered.

5: It is wrong to measure that there is water on the outer surface of the bottle!

If there is water on the outer surface of the measuring bottle, it must be wiped dry with napkins, otherwise the measuring accuracy will be affected

6: It is wrong the No shaking after adding the measuring reagent!

After adding the measuring reagent, shake it evenly, otherwise the measurement accuracy will be affected

7: If don't use it for a long time: Rinse with water to make sure the top fluorescent membrane is clean, let dry in a cool, ventilated place. Take out the battery.

Special statement

1. Old batteries must be disposed of in accordance with local laws and regulations.

2. The company reserves the right to update and modify the design specifications and the content of the manual of this product. If there is any change, it will not be notified.

Warning: electrolyte solution and All test reagents are not edible etc. cannot be eaten! Keep it out of the reach of children!

Warranty

1. The meter is warranted to be free from defects in material and workmanship for a period of one year from the date of purchase. This warranty covers normal operation and does not cover battery misuse, abuse, alteration, tampering, neglect, improper maintenance or damage resulting from leaking batteries.

2. The above warranty terms are only valid for the main instrument and consumables such as probe accessories are not covered by the warranty.

Dongguan Fulanke Technology Co., Ltd

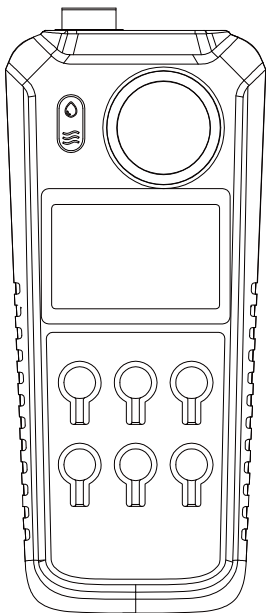
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