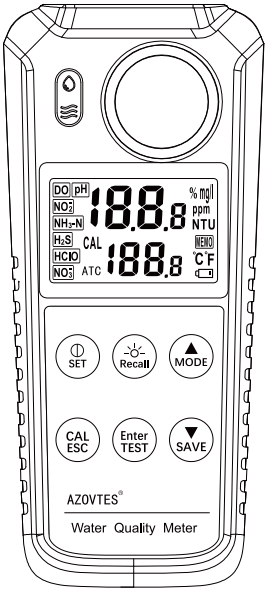
# 多功能水质检测仪

## 中英文使用说明书



# 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。

# 目录

# Catalogue

# 产品参数

| 型号： | | AE86063 | | | AE86060 |
|---|---|---|---|---|---|
| 测量项目 | PH | 硫化氢 | 亚硝酸盐 | 氨氮 | 余氯(60/63) |
| 测量范围 | 4.0~10.0 | 0.00~2.00mg/L | 0.00~1.00mg/L | 0.00~8.00mg/L | 0.00~10.00mg/L |
| 分辨率 | 0.01 | 0.01mg/L | 0.01mg/L | 0.01mg/L | 0.01mg/L |
| 测量精度 | ±0.2 | ±5%or ±0.01mg/L | ±5%or ±0.01mg/L | ±5%or ±0.01mg/L | ±5%or ±0.01mg/L |

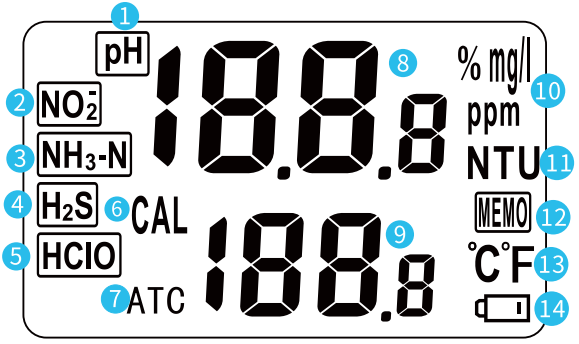
| 型号： | AE86062 | AE86065 |
|---|---|---|
| 浊度测量范围 | 0.00~20.00NTU | 0.00~1000NTU |
| 浊度分辨率 | 0.01NTU | 0.01NTU(0.00~19.99NTU)<br>0.1NTU(20.0~199.9NTU)<br>1NTU(200~1000NTU) |
| 浊度精度 | ±5%or±0.05NTU | ±5%or±0.05NTU |
| 浊度校正 | 零点校正 | 零点校正/100校正 |
| 温度范围 | 0.0~50.0°C（32.0~122.0°F） | / |
| 温度分辨率 | 0.1/0.1°F | / |
| 温度精度 | ±0.3°C/±0.5°F | / |
| PH测量范围 | 4.0~10.0 | / |
| PH分辨率 | 0.01 | / |
| PH精度 | ±0.2 | / |
| 余氯测量范围 | 0.00~10.00mg/L | / |
| 余氯分辨率 | 0.01mg/L | / |
| 余氯精度 | ±5%or±0.01mg/L | / |

# 试剂用量

| 测量项目 | PH | 硫化氢 | 亚硝酸盐 | 氨氮 | 余氯 | 浊度 |
|---|---|---|---|---|---|---|
| 试剂用量 | 试剂:2滴 | 试剂1:3滴<br>试剂2:3滴 | 1平勺 | 试剂1:3滴<br>试剂2:3滴 | 试剂:3滴 | / |
| 测量时间 | 5秒 | 8分钟内 | 2分钟 | 1分钟 | 5秒 | 5秒 |

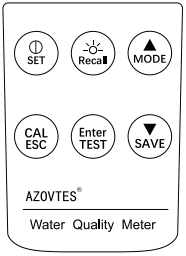
| | |
|---|---|
| 工作环境 | 0~50°C;0~80%RH |
| 存储环境 | 0~60°C;0~90%RH |
| 特殊功能 | 测量有毒氨(仅AE86063) |
| 记录数据 | 手动记录99笔(每个测量项目) |
| 自动关机 | 无操作10分钟 |
| LCD尺寸 | 27*45mm |
| 温度切换 | °C/°F(仅AE86062、63) |
| 背光 | 支持 |
| 供电 | 1.5V AAA*4 |
| 产品尺寸 | 70*28*156mm |
| AE86060<br>标配 | 仪器、测量瓶*1、5ml针筒、过滤器*2,100mL带嘴烧杯*1、余氯试剂、电池、棉签、合格证、说明书、手提箱 |
| AE86062<br>标配 | 仪器、温度探头、PH试剂、余氯试剂、普通测量瓶*1、浊度专用测量瓶*1<br>5ml针筒*2、过滤器*2、电池、棉签、合格证、说明书、手提箱 |
| AE86063<br>标配 | 主机、PH试剂(可用约80次)、亚硝粉剂(可用约80次)、氨氮试剂1、2(可用约80次)<br>硫化氢试剂1、2(可用约50次)、余氯试剂(可用约50次)、测量瓶、5ml针筒、过滤器*2、<br>量杯(50ml)、带嘴量杯(100ml)、电池、棉签、说明书、合格证、手提箱 |
| AE86065<br>标配 | 仪器、浊度专用测量瓶*1、5ml针筒、电池、棉签、合格证、说明书、手提箱 |

# 屏幕面板说明




1.“PH”测量模式
2.“亚硝酸盐”测量模式
3.“氨氮/有毒氨”测量模式
4.“硫化氢”测量模式
5.“余氯”测量模式
6. “CAL”表示校正模式
7.自动温度补偿模式
8.当前读数
9.温度/记录笔数
10. 含量单位
11. “NTU”浊度测量模式
12.记录笔数图标
13.温度单位
14.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**:增加数值/切换模式

▼/**Save键**:减少数值/切换模式/测量模式下短按可手动保存数据(最高99笔)

**TEST/Enter键**:测试键,确认键

# 设定

1：P10删除保存数据：测量模式下，长按“①/SET”键进入设定模式P10，按“TEST/Enter”键到P11，按“▲/Mode”或“▼/Save”键出现“YES”字样，按“TEST/Enter”键删除保存数据并回到P10。

2：P80切换温度单位：在设定模式P10，按“▲/MODE”或“▼/SAVE”键切换到P80，按“TEST/Enter”键进入P81再按“▲/MODE”或“▼/SAVE”键切换°C/°F单位，按“TEST/Enter”键保存，最后按“CAL/ESC”回到测量模式。(仅AE86062、3)
注意：从哪个测量模式进入设定模式，就删除哪个模式的保存数据。

# 温度测量(86062)

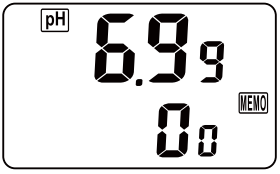
1：按SET键开机，开机成功屏幕全显3s。
2：短按“▲/MODE”键切换测量参数，当屏幕出现°C/°F，表示目前测量模式是温度测量。


(温度测量界面)

3：将测量测棒插入仪表前端的温度测棒插孔，将测棒的测量端放置放置在待测温度水样中，等待1分钟左右直到温度稳定。

# 酸碱度/PH测量（86062、86063）

1:取适量需要测量的水样到容器中备用（不同的水层深度测出来的数值可能不一样，请根据您的需求取样）。




（酸碱度测量界面）

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（水量刚好到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“TEST/Enter”键开始测量，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。
注：若选错了参数，可以退出测量，选对参数再测。

# 硫化氢测量

1:取适量需要测量的水样到容器中备用（不同的水层深度测出来的数值可能不一样，请根据您的需求取样）。


（硫化氢测量界面）

2:按“⏻/SET”键开机后短按“▲/Mode”键切换测量参数，当屏幕上出现$H_2S$标志，则表示目前选择的测量模式是硫化氢测量，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（水量刚好到5ml刻度线）。

4:往测量瓶中滴入3滴水质硫化氢$H_2S$检测试剂1，盖紧瓶盖，摇晃10秒，打开瓶盖，再滴入3滴水质$H_2S$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“TEST/Enter”键开始测量，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。
注:如果选错了参数，可以退出测量，选对参数再测。

# 亚硝酸盐测量

1:取适量需要测量的水样到容器中备用（不同的水层深度测出来的数值可能不一样，请根据您的需求取样）。


（亚硝酸盐测量界面）

2:按“①/SET”键开机后短按“▲/Mode”键切换测量参数，当屏幕上出现$NO_2^-$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。

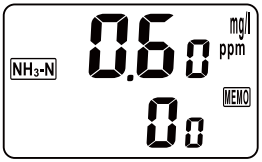
3:如果更换了测试水样，需用针筒抽取2ml左右水样，旋上过滤后将针筒中水样射出，该步骤是为了保证过滤器内是新的水样。用针筒抽测量水样5ml以上，装上过滤器，注入5ml到测量瓶中（水量刚好到5ml刻度线）。

4:舀一平勺水质亚硝酸盐$NO_2^-$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“TEST/Enter”键开始测量，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。
注：如果选错了参数，可以退出测量，选对参数再测。

# 氨氮（有毒氨）测量

1:取适量需要测量的水样到容器中备用（不同的水层深度测出来的数值可能不一样，请根据您的需求取样）。




（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$NH_3$-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（水量刚好到5ml刻度线）。

4:往测量瓶中滴入3滴水质氨氮$NH_3$-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$NH_3$-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“TEST/Enter”键开始测量，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。
注:如果选错了参数，可以退出测量，选对参数再测。

6：有毒氨（非离子态氨）计算：

a）测完同一水样的PH与氨氮以后，在氨氮模式下，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，交替显示“$NH_3$”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。

# 余氯测量(86060、62、63)

1:取适量需要测量的水样到容器中备用(不同的水层深度测出来的数值可能不一样,请根据您的需求取样)。


(余氯测量界面)

2:按“①/SET”键开机后短按“▲/Mode”键切换测量参数,当屏幕上出现HCIO标志,则表示目前选择的测量模式是余氯测量,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(水量刚好到5ml刻度线)。

4:往测量瓶中滴入3滴水质余氯$Cl_2$检测试剂,盖紧瓶盖,摇晃10秒,按正确方向放入测量孔中。

5:按“TEST/Enter”键开始测量,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。
注:如果选错了参数,可以退出测量,选对参数再测。

# 浊度测量(86062、86065)

1:按“①/SET”键开机后短按“▲/MODE”键切换测量参数，当屏幕上出现NTU标志，则表示目前选择的测量模式是浊度测量，当前显示的是上次测量的数据。

2:往测量瓶中注入5ml水样（水量刚好到5ml刻度线），盖紧瓶盖，按正确方向放入测量孔中。

3:按“TEST/Enter”键开始测量，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。
注:如果选错了参数，可以退出测量，选对参数再测。

4:浊度的零点校正:用纯水将测试瓶清洗2~3遍，往其中注入至少5ml纯水,盖紧瓶盖，按正确的方向放入测试孔中。长按“CAL/ESC”键，直到屏幕开始闪烁“CAL”字样，倒计时结束后完成零点校正，若零点校正的水不符合校正要求，建议更换校正用纯水再次校正。

5:100NTU校正:将装有100NTU的测量瓶放入测量孔中，长按“CAL/ESC”键，直到屏幕上显示CAL字样闪烁，倒计时结束后完成100NTU校正。(仅AE86065)

（浊度测量界面）

（零点校正）

（100NTU校正界面）

# 注意事项

1:测量后测量瓶用清水清洗干净甩干保存。
2:手只能抓在测量瓶上的塑胶壳上,不能抓到玻璃部位。
3:测量瓶上不能沾水,如果沾水要用餐巾纸擦干净!
4:避免太阳光直射仪表,要遮挡太阳光。
5:试剂用量不可少加或多加,否则会影响测量数值,具体用量请参考下表。

警告:不可食用,不可接触眼睛,远离儿童。

6: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。
7: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。

| 试剂/测量 | PH测量 | 亚硝酸盐测量 | 氨氮测量 | 硫化氢测量 | 余氯测量 |
|---|---|---|---|---|---|
| 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 | / | / |
| 硫化氢$H_2S$检测试剂1 | / | / | / | 3滴/次 | / |
| 硫化氢$H_2S$检测试剂2 | / | / | / | 3滴/次 | / |
| 余氯HClO检测试剂 | / | / | / | / | 3滴/次 |

# 故障代码

1）E11：校正错误；
2）E31：硬件问题；
3）E03：超出测量范围；

# 使用常见问题

1：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。

2：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。

3：测量步骤注意事项
(a) 测量水样必须用过滤器过滤，以过滤水中的杂质漂浮物等。
(b) 加入测量瓶水样刚好够5毫升不能多也不能少。
(c) 试剂用量需按标准用量及先后顺序加入测量瓶中。
(d) 加入试剂后必须摇晃均匀。
(e) 测量瓶外表面如有水渍、指纹、污垢等需用纸巾擦拭干净。请务必按以上标准步骤操作否则会影响测量精度！

4：长时间不使用的话，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,若有变动怒不另行通知!

警告: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: | AE86063 | | | | AE86060 |
|---|---|---|---|---|---|
| Measuring item | PH | sulfide | Nitrite | Ammonia | Residual(60/63) |
| Measuring range | 4.0~10.0 | 0.00~2.00mg/L | 0.00~1.00mg/L | 0.00~8.00mg/L | 0.00~10.00mg/L |
| Resolution | 0.01 | 0.01mg/L | 0.01mg/L | 0.01mg/L | 0.01mg/L |
| Accuracy | ±0.2 | ±5%or ±0.01mg/L | ±5%or ±0.01mg/L | ±5%or ±0.01mg/L | ±5%or ±0.01mg/L |

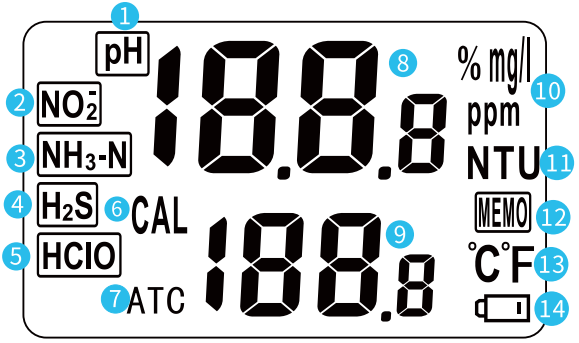
| Model: | AE86062 | AE86065 |
|---|---|---|
| Turbidity Measuring range | 0.00~20.00NTU | 0.00~1000NTU |
| Turbidity Resolution | 0.01NTU | 0.01NTU(0.00~19.99NTU)<br>0.1NTU(20.0~199.9NTU)<br>1NTU(200~1000NTU) |
| Turbidity Accuracy | ±5%or±0.05NTU | ±5%or±0.05NTU |
| Turbidity Calibrate points | 0NTU calibratiom | 0/100NTU calibratiom |
| Tep Measuring range | 0.0~50.0°C (32.0~122.0°F) | / |
| Tep Resolution | 0.1/0.1°F | / |
| Tep Accuracy | ±0.3°C/±0.5°F | / |
| PH Measuring range | 4.0~10.0 | / |
| PH Resolution | 0.01 | / |
| PH Accuracy | ±0.2 | / |
| Residual Measuring range | 0.00~10.00mg/L | / |
| Residual Resolution | 0.01mg/L | / |
| Residual Accuracy | ±5%or±0.01mg/L | / |

# Reagent dosage

| Measuring item | PH | sulfide | Nitrite | Ammonia | Residual | Turbidity |
|---|---|---|---|---|---|---|
| Reagent dosage | Dropper:2dr | Dropper1:3dr<br>Dropper2:3dr | 1soop | Dropper1:3dr<br>Dropper2:3dr | Dropper:3dr | / |
| Measuring period | 5s | 8min within | 2min | 1min | 5s | 5s |

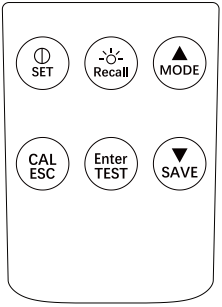
| | |
|---|---|
| Ammonia nitrogen Sepecial Function | Measuring toxic ammonia (onlyAE86063) |
| Records | 99points for everyperameter |
| Automatic shutdownfunction | 10min |
| LCD size | 27*45mm |
| Temperature unit | ℃/℉ (onlyAE86062/63) |
| Backlight | Yes |
| Power | 1.5V AAA*4 |
| Size | 70*28*156mm |
| AE86060 Productstandard | Instrument, measuring bottle *1,Residual chlorine reagent , 5ml syringe, 2 filters, 1 100mL beaker with beak, battery, certificate, manual, carrying case |
| AE86062 Productstandard | Instrument, temperature probe, PH reagent, residual chlorine reagent, ordinary measuring bottle *1, turbidity special measuring bottle *1 5ml syringe *2,filter *2, battery, Certificate, manual, carrying case |
| AE86063 Productstandard | Host, PH reagent (available about 80 times), nitrous powder (available about 80 times), ammonia nitrogen reagent 1, 2 (available about 80 times)Hydrogen sulfide reagent 1, 2 (available about 50 times), residual chlorine reagent (available about 50 times), measuring bottle, 5ml syringe, filter *2,Measuring cup (50ml), measuring cup with mouth (100ml), battery, cotton swab, instruction manual, certificate, carrying case |
| AE86065 Productstandard | Instrument, turbidity special measuring bottle *1, 5ml syringe, battery, certificate, manual, carrying case |

# Panel description




1. “PH” measurement model 2. “Nitrite” model
3. “Ammonia nitrogen/toxic ammonia” model
4. “Hydrogen sulfide” model 5. “Residual chlorine” model
6. “CAL” Presentation correction mode
7. the automatic temperature compensation mode
8. Current reading 9. Temperature/number of pens
10. Content unit 11. “Turbidity” model
12. Chart the number of pens 13. Temperature unit
14. If the battery is low, replace the battery to ensure the accuracy of measurement

# 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

**/Recall key:** 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:** Increase the setting value; Switch measuring modes

▼**/Save key**: Decrease the setting value; Short press in measurement mode to save data (Maximum of 99 records, New data can not be saved if the memory is full. it is needed to clear up existing 99 memories for new data)

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

# Setting

1：P10-Deleting data：while in measuring mode, press “⏻/SET” more than 1 second to enter Setting mode P10, press“Enter”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：P80 Switching temperature units：while in P10, press “▲/MODE”or“▼/SAVE”to switch to P80, press“TEST/Enter” to switch to P81, press“▲/MODE”or“▼/SAVE”to select ℃ or ℉ press“TEST/Enter”to save the setting. Finally, press “CAL/ESC” to return to the measurement mode.
(only AE86062、3)

# Temperature Measurement(86062)

1：Press the "⏻/SET " key to turn on the instrument. After the instrument is turned on successfully, the screen will display fully for 3 seconds.

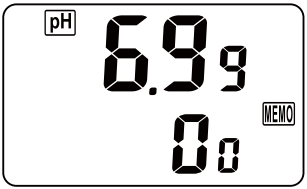
2：press the "▲/MODE" key <1S to switch the measurement parameters. When the C or F mark appears on the screen, it means that the currently selected measurement parameter is temperature measurement.

3：Insert the temperature measuring probe into the temperature measuring probe socket at the front of the meter, place the temperature measuring probe in the water sample, and wait for about 1 minute until the temperature is stable.


(Tep measurement interface)

# PH Measurement(86062、63)

1：Press the“⏻”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 pH mark appears on the screen, it means that the currently selected measurement mode is pH measurement, Currently displayed is the last measured value.




(PH measurement interface)

2：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)

3：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。

4：Press the “TEST/Enter ”key to start the measurement. Countdown appears at the top of the screen, The measurement results are displayed after the countdown endsPress “CAL/ESC” key during measurement to cancle measurement.

Tips:If you select the wrong measurement parameter,you can cancle the measurement and select the right measurement parameter to measure again.

# Sulfide 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). Clean the water sampler with clean water after use, otherwise there will be organic debris, dirt, etc.


(sulfide 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 $H_2S$ mark appears on the screen, it means that the currently selected measurement parameter is sulfide 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 3 drops of sulfide detection reagent No.1 into the measuring bottle, tighten the bottle cap, shake for 10 seconds, open the bottle cap and then drop 3 drops of sulfide detection reagent No.2, tighten the bottle cap, shake 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 after the countdown is finished. Press "CAL/ESC" key during measurement to cancle measurement

Tips: If you select the wrong measurement parameter, you can cancle the measurement and select the right measurement parameter to measure again.

# 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 "⏻/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 $NO_2^-$ mark appears on the screen, it means that the currently selected measurement mode is Nitrite measurement Currently displayed is the last measured value.

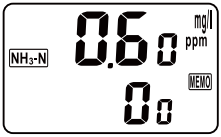
3:If the test water sample is replaced, it is necessary to take about 2mL of water sample with the syringe, screw on the filter and shoot out the water sample in the syringe. This step is to ensure that there is a new water sample in the filter.Use a syringe to extract more than 5ml of water sample for 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 are displayed after the countdown ends Press “CAL/ESC” key during measurement to cancle measurement.
Tips: If you select the wrong measurement parameter, you can cancle the measurement and select the right measurement parameter to measure again。

# 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$NH_3$-Nmark 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 are displayed after the countdown ends Press “CAL/ESC” key during measurement to cancle measurement.
Tips: If you select the wrong measurement parameter, you can cancle the measurement and select the right measurement parameter to measure again。

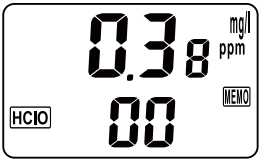
6：Calculation of toxic ammonia (non-ionic ammonia)


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, The bottom number 8 alternately displays "$NH_3$" 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.

# Residual Measurement (86060/62/63)

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)




(Residual chlorine 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 HCLO mark appears on the screen, it means that the currently selected measurement parameter is Residual chlorine 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: Press the "TEST/Enter" key to start the measurement. Countdown appears at the top of the screen, and the measurement The result will be displayed after the countdown ends. Press "CAL/ESC" key during measurement to cancle measurement.
Tips: If you select the wrong measurement parameter, you can cancle the measurement and select theright measurement parameter to measure again.

5：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.

# Turbidity Measurement(86062、65)

1: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 NTU mark appears on the screen, it means that the currently selected measurement mode is turbidity measurement,Currently displayed isthe last measured value.

2:Zero point calibration of turbidity. Rinse the test bottle with pure water two or three times, then inject at least 5mL of pure water into it, tighten the bottle cap, and place it into the measuring hole in the correct direction. Press the "CAL/ESC" button >1S until the word "CAL" appears on the screen and flashes. Complete zero correction after countdown. If the water used for zero point calibration does not meet the calibration requirements, the screen will display E11. It is recommended to change the pure water and re-calibrate again.

**3：100 NTU turbidity calibration. Place the 100NTU calibration glass bottle into the measuring hole in the correct way. Press the"CAL/ESC" button >1S until the word "CAL" appears on the screen and flashes. Complete 100NTU correction after countdown (only AE86065).**


(Turbidity measurement interface)


(Zero NTU correction)


(100NTU correction)

4：Inject at least 5mL of water sample into the test bottle, tighten the bottle cap, 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 Finish calibration after countdown.

Pour out the water sample in the measuring bottle after measurement, clean the measuring bottle with clean water (purified water, tap water, etc.), Drain water, tighten the cap

## Fault code

1) E11：Correct error；
2) E31：Hardware problem, need repair；
3) E03：measured value exceeds the upper limit；

# Tips

1: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.

2:The hand can only grasp the plastic shell of themeasuring bottle, not the glass.

3:The measuring bottle shall not be stained with water. If it is stained with water, clean it with napkin.

4:Avoid direct sunlight on the instrument! To block sunlight.

5: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.

6:Keep the cap of the reagent bottle back and tighten it to avoid reagent failure due to long-term contact with air.

7: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.

| Reagent measurement | PH measurement | Nitrite measurement | Ammonia nitrogen measurement | sulfide measurement | Residual chlorine measurement |
|---|---|---|---|---|---|
| PH detection reagent | 2 drops | / | / | / | / |
| Nitrite detection reagent | / | 1soop | / | / | / |
| Ammonia nitrogen test reagent 1 | / | / | 3drops | / | / |
| Ammonia nitrogen test reagent 2 | / | / | 3drops | / | / |
| sulfide detection reagent1 | / | / | / | 3drops | / |
| sulfide detection reagent2 | / | / | / | 3drops | / |
| Residual chlorine detection reagent | / | / | / | / | 3drops |

# FAQ

1：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.

2: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.

3:Measurement Steps and Precautions:
(a) The water sample for measurement must be filtered using a filter to remove impurities and suspended particles in the water.
(b) Add the water sample to the measuring flask, ensuring it is exactly 5 milliliters, neither more nor less.
(c) Reagents should be added to the measuring flask in the specified quantity and order according to the standards.
(d) After adding the reagents, it must be thoroughly shaken to ensure even mixing.
(e) If there are water stains, fingerprints,dirt, etc., on the outer surface of the measuring flask, they should be wiped clean with a tissue.It is essential to follow these standard procedures; otherwise, it may affect measurement accuracy.

4: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

# 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 meteris warranted to be free from defects inmaterial andworkmanship foraperiod ofone year fromthe date of purchase.This warranty covers normaloperation and does notcover batterymisuse, abuse,alteration, tampering, neglect,improper maintenanceordamage resulting from leaking batteries.

2.The above warranty terms are only valid forthemain instrumentand consumables such as probeaccessories are not covered by thewarranty.

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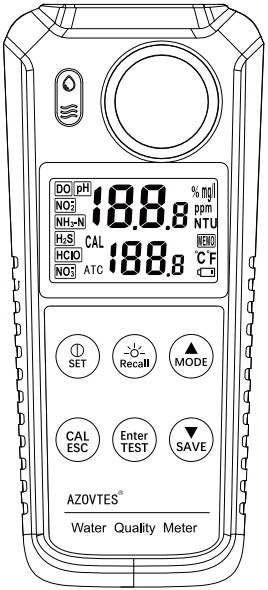


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