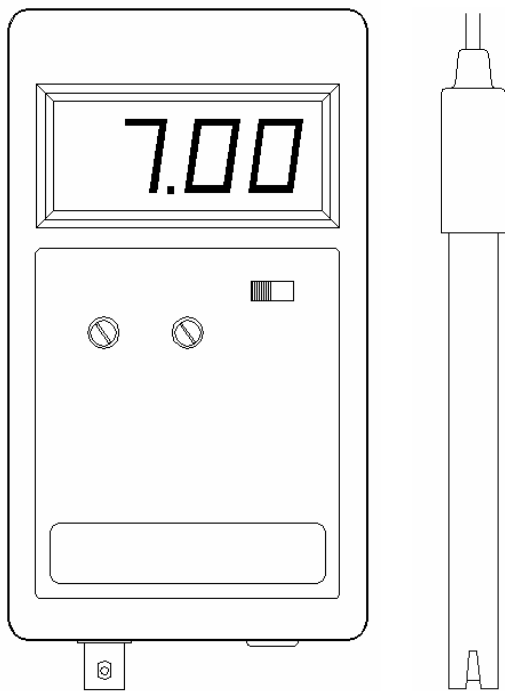


pH 測試器使用說明書

掌上型攜帶式、壁掛式



使用本 pH 測試器前，請詳細閱讀說明書，
確保測試值的準確度。

- (2) 打開儀器電源開關。
- (3) 等顯示值穩定後，調整pH7校正旋鈕，使顯示值為 7.00。
- (4) 將電極以乾淨的清水稍做清洗擦乾後(避免污染校正液)，將電極放入 pH4.00 校正液中，等顯示值穩定後，調整pH4校正旋鈕，使顯示值為 4.00。(若為pH10.00校正液，調整pH4校正旋鈕，使顯示值為 10.00)
- (5) 重複上述校正步驟兩次以上，先校正pH7再校正pH4，確保校正準確性。
- (6) 如果校正時的數字顯示變化太緩慢、或無法調整到正確數值，電極可能老化不良，需要更換新的pH電極。

測試步驟

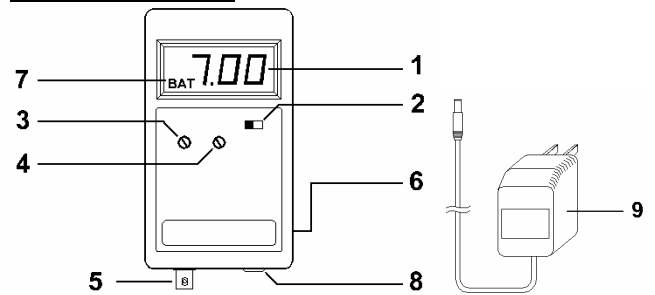
經過pH電極搭配儀器的校正後，這組儀器此時便可以開使測量pH值了。

- (1) 接上pH電極於儀器的BNC接頭。(插入右轉到底)
- (2) 打開儀器的電源開關。
- (3) 將電極放入欲測試的溶液中等顯示值穩定後，顯示值即為欲測試溶液的pH值了。
- (4) 電極測試完欲收藏時，將電極以乾淨的清水稍做清洗後，將電極放入裝有3莫爾的KCL保存液的封套中，以保持感應頭潮濕及活性。

電池更換步驟

- (1) 當顯示器左下方 "BAT" 符號出現的時候，表示電池電壓低於 6.5V~7.5V，此時必須要更換新的電池。(6F22K, 006P DC9V)以確保測量的準確性。
- (2) 用小型 "一" 字起子，伸入電池蓋孔內，輕往下壓即可打開電池蓋。
- (3) 更換新的電池前，請先關閉電源開關。取出舊電池，換

測試器名稱說明



- 1) LCD 顯示器
- 2) 電源開關
- 3) pH4校正旋鈕(SLOPE)
- 4) pH7校正旋鈕(CAL)
- 5) pH電極BNC接頭聯接座
- 6) 電池蓋 (背面)
- 7) 電力不足顯示符號
- 8) AC電源轉換器接頭插座 (中心軸2.5 mm)
- 9) AC電源轉換器

PH 校正方法

校正條件

本pH測試儀器出廠前已經過模擬pH電壓調整校正，但因為每一只電極零點均不同，因此使用前須實際以pH電極經校正液pH4及pH7校正過，(溫度接近25°C)，才能確保測試準確度，長時間使用時，請定期校正(大約2到3週)，確保測量的準確性。

校正所需設備

- (1) pH電極 (可再選購)。
- (2) pH7.0及pH4.0或pH10.0校正液(可再選購)及乾淨的水。
- (3) 旋鈕調整棒。

兩點校正方式

- (1) 接上pH電極於儀器的BNC接頭(插入右轉到底)，將電極用蒸餾水清洗擦乾後放入pH7校正液中。(避免污染校正液)

上新的電池 (6F22K, 006P DC9V)，蓋回電池蓋。

保養及清潔方式

- (1) 清潔電極或儀器外觀時，請關閉電源及避免水濺入儀器內部，導致損壞。
- (2) pH 電極為一精密之玻璃製品，請勿敲擊、請勿用手、布類及酒精擦拭電極感應頭，避免損壞。
- (3) 電極請定期 (2-3星期) 清洗感應頭所附著之藻類或雜質，且作pH7及pH4的校正，以確保測量的準確性。不用時，電極請置於有3莫爾的KCL保存液(pH4校正液也可)之封套內，若有結晶乃屬正常現象。

電器規格

顯示數字：18mm (0.7") LCD 3 1/2 位數。

測量範圍：0 - 14 pH。

解析度 (讀值)：0.01 pH。

精確度(溫度在25°C校正後)：±(0.1%+2位數)-於校正後。

輸入阻抗：10¹² 歐姆。

資料更新速度：0.4 秒。

使用溫度範圍：0 - 50°C (32 - 122°F)。

使用溼度範圍：低於90%相對溼度。

校正方式：外部校正pH4或pH10 (Slope)、pH7 (Cal.)。

電源：9V電池 DC9V 006P, 6F22K, AC電源轉換器另購。

消耗電力：大約 DC 2 mA。

外觀尺寸：150 x 85 x 40 mm. (5.9 x 3.4 x 1.6 吋)。

重量：大約220 g (0.5 lb.)不含電池。

附件：說明書、調整棒、儀器掛架、電極支架各一。

pH電極(可選購)：任何含BNC接頭的電極均可。

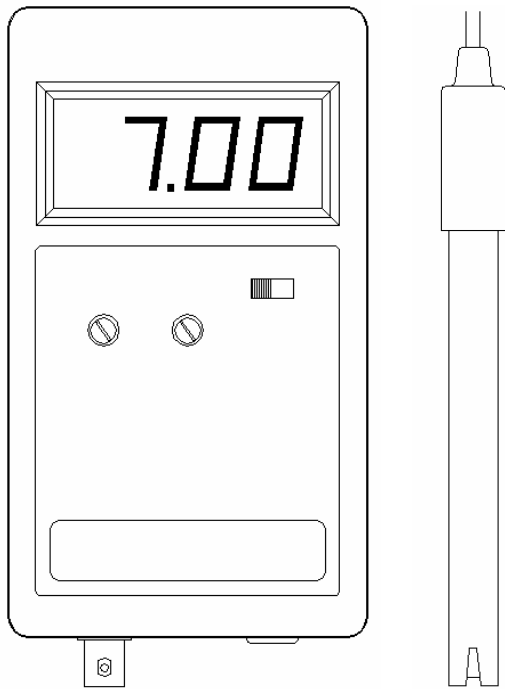
AC電源轉換器(選購)：輸出DC9V 125 mA. (中心軸 2.5mm)。

儀器台灣製

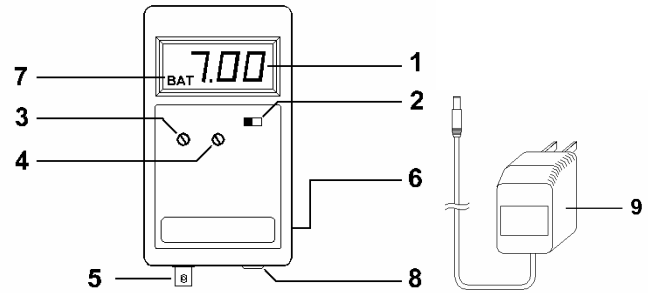
OPERATION MANUAL

DIGITAL pH METER

PORTABLE, WALL MOUNT



FRONT PANEL DESCRIPTION



- | | |
|----------------------------------|------------------------------|
| 1) LCD Display | 6) Battery cover (back side) |
| 2) Power ON / OFF switch | 7) Low battery indicator |
| 3) SLOPE (pH4) adjust knob | 8) AC adapter socket |
| 4) CAL. (pH7) adjust knob | (2.5 mm shaft) |
| 5) pH electrode BNC input socket | 9) AC adaptor |

PH CALIBRATING PROCEDURE

Calibrating Consideration

These pH meter already calibrated by mV signal that simulated from the ideal pH Electrode mV output (base on 25 °C environment). However due to (1) An ideal electrode will produce 0 mV at pH7.00, but most electrodes are slightly off. (2) The measuring environment temperature may not near 25 °C. It is necessary to make the following calibration procedure that to keep instrument combine electrode within high accuracy.

Requiring Equipment for Calibration

- (1) Combination pH Electrode (optional).
- (2) Two buffer solutions (optional) : pH7.0 & pH4.0. (or pH10.0)
- (3) Adjusting sticker.

Two Points Calibration

- (1) Connect the pH Electrode to the BNC socket, rinse it in distilled

INSTRUCTION FOR CLEANING AND MAINTENANCE

- 1) It must to turn off the power when cleaning the electrodes and instrument.
- 2) pH electrode is accurate glass product, please do not knock it, and do not use finger, cloth and alcohol to clean it to avoid the damage.
- 3) It had better to clean and calibrate the electrode during 2-3 weeks to make sure the reading within accuracy when measuring in a long time.

GENERAL SPECIFICATION

Display : 18mm (0.7") LCD 3 1/2 digits.
 Measuring Range : 0 to 14 pH.
 Resolution : 0.01 pH.
 Accuracy : $\pm(0.1\%+2 \text{ digits})$ after calibration.
 Input Impedance : 10^{12} ohms.
 Sampling Time : 0.4 seconds.
 Operating Temp. : 0 to 50 °C. (32 to 122 °F).
 Operating Humidity : Less than 90% RH.
 Calibration Knob : External pH4 or pH10 (Slope), pH7 (Cal.)
 Power Supply : DC9V 006P, 6F22K battery,
 AC power adapter (optional)
 Power Consumption : Approx. DC 2 mA.
 Dimension : 150 x 85 x 40 mm. (5.9 x 3.4 x 1.6 inch).
 Weight : Approx. 220 g. (0.5 lb.) without battery.
 Standard Accessories : Instruction Manual, Adjustment Sticker,
 Electrode Holder, pH Meter Holder.
 pH Electrode (optional) : Any pH Electrode with BNC connector.
 AC regulator adapter (optional) : output DC9V 125 mA.
 (2.5mm shaft)

Before putting the pH meter to use, please read the following instructions carefully.

water and drying it, place electrode into buffer pH7.00 solution. (Avoid pollutes the calibrating buffer solution.)

- (2) Turn on the power switch of instrument.
- (3) Waiting few seconds for stable reading, adjust the "CAL.(pH7) adj. knob" until the display reading same as 7.00 exactly.
- (4) Rinse the electrode in distilled water and drying it. Then place electrode into buffer pH4.00 solution. Waiting few seconds for stable reading, adjust "SLOPE (pH4) adj. knob" until the display reading same as 4.00 exactly.
- (5) Repeat above procedures two times at least. (Calibrate pH7 first.)
- (6) It need to change a new electrode when display reading is slowly or can not adjusting to the right value when calibrating.

MEASURING PROCEDURE

After the instrument and pH electrode are calibrated, then the unit is now ready for measuring.

- (1) Connect the combination pH electrode to the BNC socket.
- (2) Turn on the power switch of instrument.
- (3) Place the pH electrode into the measured solution, then the instrument will display the pH value.
- (4) After make the measurement, please rinse the electrode in distilled water. Then put the electrode into bottle with 3M KCL buffer solution for storage.

REPLACEMENT OF BATTERY

- (1) When the left corner of LCD display "BAT" is appeared, it indicate a normal battery voltage less than 6.5 - 7.5V. It is necessary to replace the battery.
- (2) Replace the battery, use tool to remove the battery cover (back).
- (3) Take out the battery, install a new one (DC9V 006P, 6F22K) and reinstate the battery cover again.