

Common pH Explanation

pH range - acidity and alkalinity common substances examples

- 0 - 3 [strongly acidic]: Battery acid (pH = 1), stomach acid (pH = 1.5 - 3.5), lemon juice (pH = 2)
- 3 - 7 [weakly acidic]: Apple (pH ≈ 3), coffee (pH = 5), milk (pH = 6.6)
- 7 [neutral]: Pure water (pH = 7)
- 7 - 11 [weakly alkaline]: Seawater (pH ≈ 8), baking soda (pH = 8.3), soap (pH = 9 - 10)
- 11 - 14 [strongly alkaline]: Ammonia water (pH = 11.5), bleach (pH ≈ 13), sodium hydroxide (pH = 14)

PH Usage Instructions

The glass bulb is fragile. Please do not bump it. When using it normally, a rubber net cover must be used.

Installation angle: Vertical installation. Ensure that there are no bubbles at the bottom of the glass bulb when in use.

Installation depth: Completely submerged in the liquid to be tested.

The net cover is placed lower than the glass surface to prevent air from accumulating outside the glass area, which could affect the measurement.



Note: The glass surface is fragile. A net cover must be used. The net cover should be installed below the glass surface.

PH Calibration Environment Description

PH Calibration Environment Instructions and Operating Notes:

Prepare the PH 4.00/6.86/9.18 standard buffer solutions [Do not use the PH 4.00/7.00/10.01 standard solutions]

Before each calibration, make sure to rinse and dry the sensor with clean water to avoid any residual moisture from contaminating or diluting the standard solution.

The sensor should be immersed in the standard solution as much as possible. The liquid level should reach at least the point where the red rubber ring is located. The best result is achieved when the entire sensor is submerged. Metal containers such as cans or stainless steel cups must not be used.

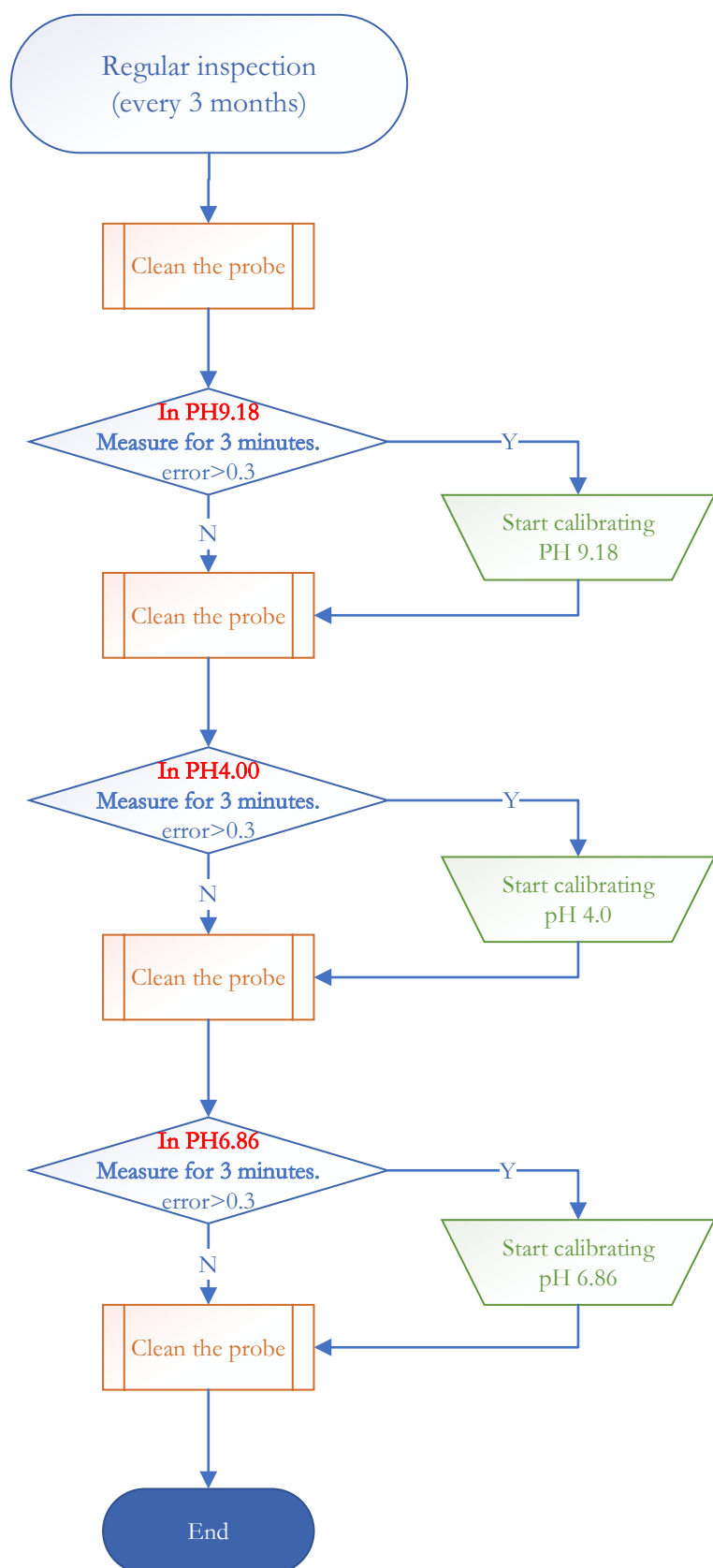
Preparation method:

Mix 250 ml of tap water (deionized water / distilled water / purified water) with the buffer, and stir until fully dissolved.

The prepared buffer solution should be stored under seal for a shelf life of one month.



PH Calibration Procedure Explanation



Calibration Instructions

When the error between the reading and the standard solution is greater than 0.3, calibration can be performed.

Work for at least 3 minutes, and read stable data before starting the calibration.

If precise comparison measurement is required, it is recommended to perform calibration and measurement at the same temperature.

The electrode slope and zero potential of the pH electrode will undergo slight drift over time. To accurately measure pH, it is recommended to conduct regular checks and calibrations of the pH value.

Cleaning the probe steps:

Clean the electrodes: Rinse the sensor with tap water, then use a paper towel to dry the remaining water on the sensor.

Calibration of PH Software Operating Instructions

Reg40 is the PH calibration register

Write Reg40

Write 1/3/5 to start the calibration

1. Start calibration at pH 4.00
3. Start calibration at pH 6.86
5. Start calibration at pH 9.18

Write 2/4/6 to clear the calibration

2. Clear the calibration value for pH 4.00
4. Clear the calibration value for pH 6.86
6. Clear the calibration value for pH 9.18

Read reg40

Byte 0: Calibration flag

- [0: Calibration completed]
- [1: PH4.00 Calibration in progress]
- [2: PH6.86 Calibration in progress]
- [3: PH9.18 Calibration in progress]

PHCalibrati	40	0	0	0	1	Read	Write
Status:	PH4.00	PH6.86	PH9.18	WriteCalibrOperate			
Calibration finish	Not calibrated	Not calibrated	Not calibrated	1 Start pH4.00 Calibr			
				2 Clear pH4.00 calibr			
				3 Start pH6.86 calibr			
				4 Clear pH6.86 calibr			
				5 Start pH9.18 calibr			
				6 Clear pH9.18 calibr			

PHCalibrati	40	1	0	0	0	Read	Write
Status:	PH4.00	PH6.86	PH9.18	WriteCalibrOperate			
Calibration underway	Not calibrated	Not calibrated	Not calibrated	1 Start pH4.00 Calibr			
				2 Clear pH4.00 calibr			
				3 Start pH6.86 calibr			
				4 Clear pH6.86 calibr			
				5 Start pH9.18 calibr			
				6 Clear pH9.18 calibr			

PHCalibrati	40	0	1	0	0	Read	Write
Status:	PH4.00	PH6.86	PH9.18	WriteCalibrOperate			
Calibration finish	Calibrated	Not calibrated	Not calibrated	1 Start pH4.00 Calibr			
				2 Clear pH4.00 calibr			
				3 Start pH6.86 calibr			
				4 Clear pH6.86 calibr			
				5 Start pH9.18 calibr			
				6 Clear pH9.18 calibr			