

# Instructions of Sodium Hypochlorite Meter (Model CL-4)

## Functions

Monitoring the concentration of water in the deployment of bleach

## Features

- This meter provides general guidance for adding and monitoring Sodium Hypochlorite (NaOCl) in wash and flume water and can be used as a starting point to develop operation specific procedures of sanitations. It is a good helper standardized cleaning operations moderate concentrations of bleach water.
- Wide applications: house health, schools, public areas, playgrounds, hotels, bars, restaurants, hospitals, office, bank, shopping malls, supermarkets, airports, harbors, airplanes, vessels, and food preparation establishments where a chlorine level needs to be maintained to the flume or cleaning water for disinfection such as food containers, drinking containers, food contact surfaces, kid toys, telephones, computer mouse, tables, chairs, kitchens, handrails, desks, drivers wheels, floors, walls, toilets, bathrooms, and public transportations.
- Innovative built-in automatic temperature compensation
- Fast, straightforward results
- Wide range up to 0.69%
- Automatic turnoff in 40 seconds
- Easy to operate: one button

## Specifications

Range	0 to 0.69%
Sensitivity	0.01%
Accuracy	$\pm(3\%+1d)$
Display	LCD 2 digits
Battery	CR2032, 3V silver battery
Operating Temp	0 to 50°C
Dimension	170x27x22mm
Weight	50g

Remark: 0.01%=100ppm, 0.69%=6900ppm

## Operation methods

- Making 0.05% or 0.5% NaOCl.
- Submerge this meter head 2cm depth in water.
- Shake the probe to let the probe's internal air bubble drift out from the sensing head
- Push button to read number from displays. If display shows temperature, push buttons again will show back to concentration values.
- Adjust the concentration to the targets.
- The displays will turn off in 40 seconds automatically. Push button again to wake up displays and continue measurement.

## Determine your NaOCl levels

Food containers	50-150ppm
Non-porous food contact surfaces	100-200ppm
Porous surfaces	600ppm
Floors and Walls	1000ppm

## Accuracy depends on several factors:

- Water Temperature-lukewarm water is the best (25°C/77°F)
- pH between 6.5 and 7.0
- Water quality:Hardness will have fouling.

## Safety Considerations

- NaOCl concentrations that are too high can damage the product and harm body. It is wise to wear protective clothing and eye covering when using NaOCl solutions.
- Make sure that the area is well ventilated. Harmful chlorine gas can be produced if the solution falls below pH 4.0 or if the NaOCl is used in hot water.
- Do not mixed with others cleaning solutions that may reduce the effectiveness of NaOCl.
- When mixed with acidic cleaners, such as some toilet cleaner, will produce toxic gases.

## Cleaning and Trouble Shooting

Use water to clean the sensor after measurement.

Reading unstable	Air in between sensors
HI	Over measure range
Unusual lower number	Sensor fouling, used 0.1N HCL to clean
No reading	CHK battery
LCD Flash	CHK battery

## Reference article:

- Guideline for Disinfection and Sterilization in Healthcare Facilities, Healthcare Infection Control Practices Advisory Committee (HICPAC), CDC 2008
- Vessel Sanitation Program 2011 Operations Manual, U.S. Public Health Service Centers for Disease Control and Prevention/ National Center for Environmental Health
- Guidance for Industry: FDA Records Access Authority Under Sections 414 and 704 of the Federal Food, Drug, & Cosmetic Act
- Canadian Horticultural Council, On-Farm Food Safety Manual Appendices , Version 6.0, 2012