

Date: July 1, 2013

To Whom It May Concern,

The Happy Sumo Japanese Restaurant, located at 123 Main Street, West Boston, Massachusetts is requesting a variance for the exemption of acidified rice (sushi rice) as a potentially hazardous food specified under 3-502.11. The sushi rice contains vinegar as a means of food preservation in addition to flavor enhancement.

The facility has a HACCP plan. A pH log will be maintained for pH results of each batch of sushi rice. The plan is maintained at the restaurant and will be available for your review.

If you have any question, please don't hesitate to contact me.

Sincerely,

*Jacky Chan*

Jacky Chan, President  
The Happy Sumo Japanese Restaurant

## HACCP PLAN FOR THE PRODUCTION OF SUSHI RICE

**PURPOSE:** Cooked rice maintained in the temperature danger zone (41 - 140°F) is susceptible to the outgrowth of spore-forming bacteria such as *Bacillus cereus*. Because the functionality of sushi rice requires its use at room temperature, the rice must be acidified to a pH value below 4.1 to inhibit the growth of these spore-forming bacteria. This HACCP plan addresses proper acidification of rice for room temperature storage and use as per Food Code variance requirements.

**Rice and Sushi Vinegar are purchased from reputable suppliers**

### ***Rice Ingredients***

6 cups of rice  
6 cups of water  
5 cup of sauce

### ***Sauce Ingredients (stored in clean, covered container)***

32 cups of vinegar  
14 cups of sugar  
4 cups of salt

### **Preparation of sushi rice**

Wash rice thoroughly

Place even amounts of rice and water in rice cooker

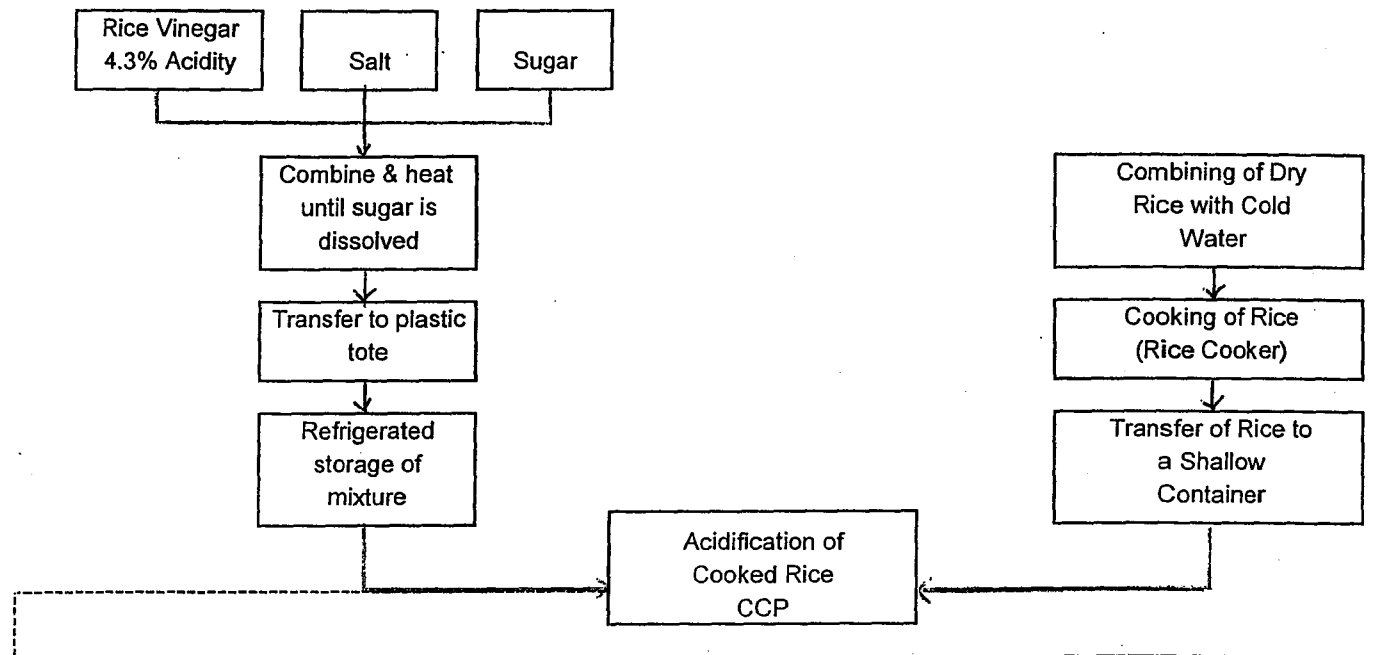
Cook until it done (estimated 45 – 60 minutes)

Cool down of 15-20 minutes

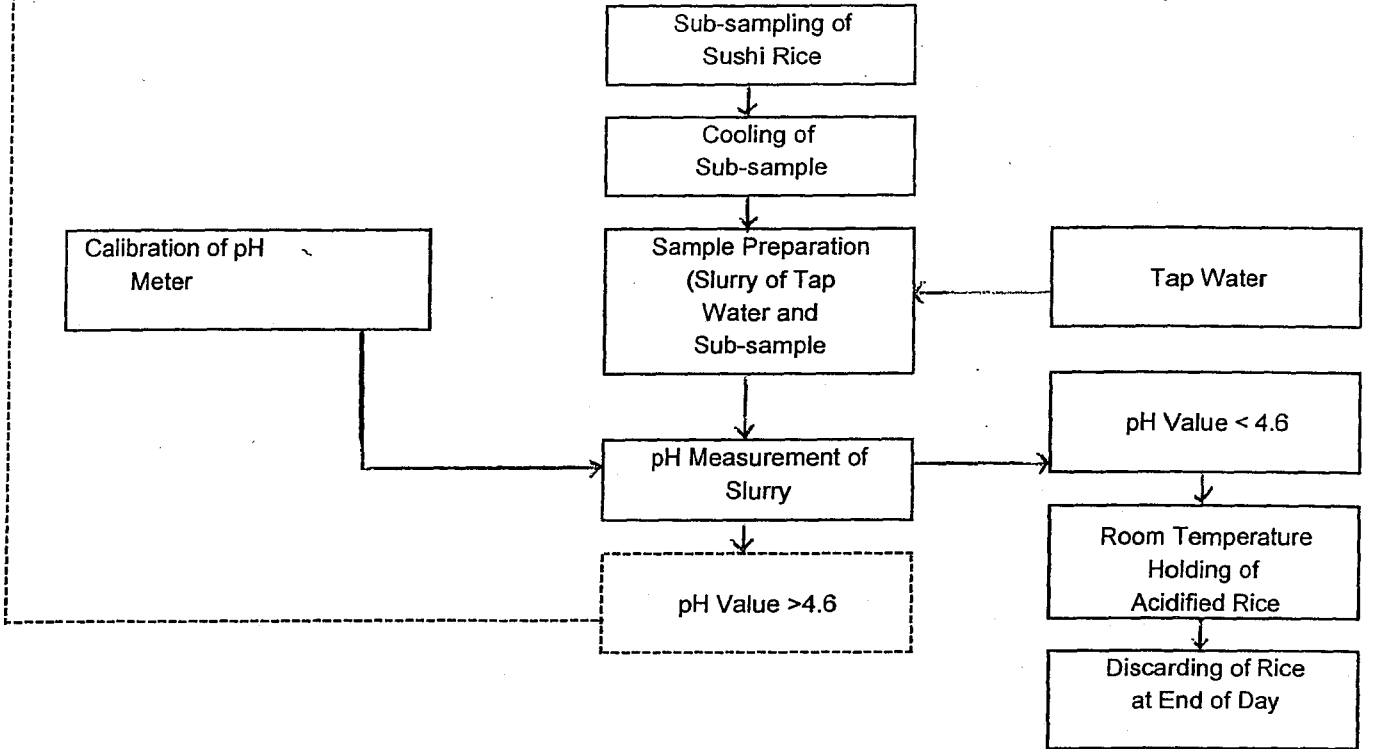
Pour rice into a clean container and spread evenly with vinegar mixture (sauce).

1. Tap water should be used to make the rice slurry when measuring the pH.
2. The pH is measured immediately according to established procedures, an initial target pH of 4.1 is often required. Only the required pH buffer(s) should be used for calibration. (See: HACCP Master Plan, Standard Operating Procedures for pH Measurement, and Summary of Training Elements for the Production of Sushi Rice)
3. Shelf-life: Same Day Use (maintained at room temperature)  
Discard unused rice at the end of the day.
4. The pH value of sushi rice formulated according to the above listed formulation and procedures was validated by an independent laboratory and found to be less than 4.1 (see attached).  
Sushi rice acidification shall be verified according to the HACCP Master Plan.
5. This HACCP plan shall be reviewed a minimum of once per year or as needed by the PIC and shall be signed and dated to document this review.

**FLOW DIAGRAM OF THE PRODUCTION OF SUSHI RICE**



**SOP FOR pH MEASUREMENT**



### HACCP PLAN MASTER SHEET FOR THE PRODUCTION OF SUSHI RICE

Critical Control Point	Hazard Controlled	Critical Limit(s)	Monitoring	Corrective Action	Records	Verification
<p><b>PRODUCTION OF SUSHI RICE</b> (Acidification to exempt rice as a PHF using a validated recipe)</p>	<p>Growth of Pathogens (spore-formers including <i>Bacillus cereus</i>)</p>	<p>pH value of finished sushi rice &lt;4.3 if measured within 2 hrs &lt;4.6 if tested after 2 hrs of preparation  Recipe validated at a targeted pH ≤4.1.</p>	<p>What - sushi rice How - A calibrated pH meter as per Standard Operating Procedures for pH measurement  Frequency - each batch  Sushi chef will be responsible for the preparation, testing and record the pH value of the sushi rice for each fresh batch.  Kitchen Manager or owner will be responsible for monitoring and reviewing records weekly</p>	<p>For rice made less than two hours, if pH value is greater than 4.3 and &lt;4.6, add more vinegar until a value below 4.3 is achieved. Record new value  For rice made less than one hour, if pH value is greater than 4.6, cool immediately or add additional vinegar until a value below 4.3 is achieved. Record new value  For rice with a pH value &gt;4.6, if made greater than one hour from measurement, discard rice.  To prevent recurrence: Verify use of correct recipe. Verify proper use of pH meter, including buffer integrity, battery Verify adherence to SOP for pH measurement Verify temperature  Discard unused rice at the end of the day</p>	<p>pH log for each batch of rice and corrective action has been made daily. Log sheet shall be maintained for 30 days  Invoices for raw fish shall be maintained for 30 days  Lab results shall be maintained for one year  Employee Training Log shall be maintained for one year</p>	<p>1. Calibration of pH meter daily prior to use  2. Monitor and Review by PIC performed weekly  3. pH of rice tested by a food laboratory a minimum of once a year or when daily pH levels are consistently higher than the laboratory validated pH measurement.  4. HACCP plan reviewed a minimum of annually or as needed by PIC (Signed and dated by PIC upon review)</p>

Sushi Chef shall prepare, test and record value of sushi rice for each fresh batch.  
 The pH meter shall be calibrated according to established procedures and at a frequency established in the HACCP Master Plan. Follow the Standard Operating Procedure for pH Measurement

Date/Initials of pH meter calibration	Date	Time	pH of sushi rice	Corrective Action (if required)	Sushi Chef initials	PIC Record Verification Date / Initials	Title

- NOTES:
1. Do not use rice that has not been tested
  2. For rice made within one hour, if pH value is greater than 4.6, cool immediately or add additional vinegar until a value below 4.3 is achieved.
  3. For rice made greater than one hour, if pH value is greater than 4.6, discard rice.
  4. Verify use of correct recipe and procedures
  5. Verify calibration and proper use of pH meter
  6. Unused rice shall be discarded at the end of the day, no left over will be used

**SUMMARY OF EMPLOYEE TRAINING ELEMENTS**  
**FOR THE PRODUCTION OF SUSHI RICE**

1. All employees involved in the production of sushi rice shall be trained in proper personal hygiene including:
  - proper hand-washing (procedures and frequency)
  - proper hair restraints
  - proper clothing (uniform and/or use of apron)
  - removal of jewelry during production
  - proper use of gloves and no bare hand contact of ready-to-eat products
  
2. All employees involved in the production of sushi rice shall be informed of their responsibility to report to the PIC when they are experiencing symptoms such as nausea, vomiting, diarrhea, fever, sores, or any other symptoms that may affect the safety of food.  
The PIC shall restrict that employee from working at the food establishment immediately until the employee is free of all symptoms or provides written evidence for the discharges of illness.
  
3. All employees involved in the production of sushi rice shall be trained in the proper use of applicable food contact surfaces including:
  - proper cleaning and sanitizing procedures
  - proper storage procedures of equipment
  - proper handling procedures of equipment
  - proper procedures for preventing cross-contamination
  - proper use and storage of wiping cloths
  
4. All employees involved in the production of sushi rice shall be trained on the elements of the HACCP Plan for the Production of Sushi Rice including:
  - proper cooking procedures
  - proper formulation of sushi vinegar mixture
  - proper acidification of sushi rice through cooked rice to vinegar mixture ratio control and mixture distribution
  - proper sub-sampling procedures of sushi rice for pH measurement
  - proper preparation of sushi rice for pH measurement
  - proper storage and use of sushi rice
  - proper shelf-life of sushi rice
  
5. All employees involved in the production of sushi rice shall be trained on the Standard Operating Procedure for pH Measurement including:
  - proper calibration procedures
  - proper pH measurement of sample
  - proper handling procedures of buffer./ pH meter
  - proper storage procedures of buffer / pH meter
  - current HACCP critical limits established in the plan
  - current HACCP monitoring frequency established in the plan
  - proper HACCP corrective actions when a deviation for a critical limit occurs
  - proper HACCP verification procedures / frequency
  - proper retention of records for 30 days

### **Employee Health and Hygiene**

All employees involved in the production of sushi rice shall be informed of their responsibility to report to the Kitchen manager or owner when they are experiencing symptoms of:

- i) Illness, infection, or other source such as inausea, vomiting, diarrhea, fever, sores throat;
- ii) A lesion containing pus such as a boil or infected wound that is open or draining;
- iii) Had a past illness from an infectious as Item (i); or
- iv) Any symptoms that may affect the safety of food.

The Kitchen manager or owner shall restrict the employee from working at the food establishment immediately until the employee is free of all symptoms or provides written evidence for the discharges of illness.

### **Cleaning and Sanitizing Procedures**

All utensils and equipment contacting Potentially Hazardous Food shall be cleaned less frequently than every 4 hours or after used;

Washed utensils and equipment shall be rinsed so that abrasives are removed and cleaning chemicals are removed or diluted through the use of water or a detergent-sanitizer solution by using one of the following procedures:

- (A) Use of a distinct, separate water rinse after washing and before sanitizing if using;
  - i) A 3-compartment sink;
  - ii) A 3-step washing, rinsing, and sanitizing procedure in a warewashing system
- (B) Use of a nondistinct water rinse that is integrated in the hot water sanitization immersion step of a 2-compartment sink operation;

### **Methods of Sanitizing**

- (1) Hot water manual operations by immersion for at least 30 seconds in hot water at the temperature of 77° C (171 °F) or above.
- (2) Chemical manual operations by immersion for at least 7 second in the chlorine solution of 50mg/L that has a pH of 10 or less and a temperature of at least 38° C (100° F).

### **Cross-Contamination Prevention**

- Each ingredient should be kept in a separate container
- Use only dedicated food preparation sinks for preparation of ingredients
- Cleaning and sanitizing of equipment and utensils each time before use with a different type of food
- Plastic wrap should be changed at least every four hours or after use on raw fish if the mat is to be used again on cooked product

### **Use of pH Meter**

Sushi Chef shall use pH strips or calibrated pH meter to test each batch of rice according to manufacturer's instructions attached at the HACCP Plan daily. Calibrate pH meter before used. Verify calibration and proper use of pH meter, including buffer integrity, battery if needed.

### **Monitoring Procedures for Acidified Rice**

Sushi chef shall make sushi rice follow to the house approved recipe, and test batch of sushi rice by using the pH meter before used, if pH value greater than 4.6, corrective action follow the procedures at HACCP master plan must be occurred. Sushi Chef shall record all test result and corrective action at the pH/Calibration log sheet daily. The pH/Calibration shall be maintained at the establishment for 30 days. Kitchen manager or owner shall review and monitor the pH/Calibration on weekly basis or whenever as needed.

### **Recordkeeping Requirements**

The approved HACCP plan and associated records will be file at the food establishment and available for review.

- pH log for each batch of rice and all corrective actions shall be maintained for 30 days
- Laboratory test results shall be conducted annually and maintained for one year

### **Corrective Actions**

A deviation occurs when a predetermined critical limit is exceeded, resulting in a potential impact on the health & safety of the product. In some cases, the corrective action procedures reflect regulatory requirement (e.g., sufficient acidification, etc.). Corrective actions must include the course of action to be taken in order to deal with the deviations when they occur and they must match corrective action procedures listed in the validated HACCP Plan.

#### **Corrective action procedures:**

1. For rice made less than two hours, if pH value is greater than 4.3 and <4.6, add more vinegar until a value below 4.3 is achieved. Record new value, date and time.
2. For rice made less than one hour, if pH value is greater than 4.6, cool immediately or add additional vinegar until a value below 4.3 is achieved. Record new value, date and time.
3. For rice with a pH value >4.6, if made greater than one hour from measurement, discard rice.

To prevent recurrence;

- Verify use of correct recipe
- Verify proper use of pH meter, including buffer integrity, electrode integrity, and a fully charged battery
- Verify adherence to SOP for pH measurement

All corrective actions shall be documented in records that are subject to verification, under record keeping procedures, during the field verification inspection.



**EMPLOYEE TRAINING LOG**

The employees listed below have been properly trained in correct procedures for the production of sushi rice as per the SUMMARY OF EMPLOYEE TRAINING ELEMENTS FOR THE PRODUCTION OF SUSHI RICE

EMPLOYEES NAME	TITLE	EMPLOYEE SIGNATURE	TRAINING DATE

This sheet must be signed and dated by the employee upon completion of training.

## GUIDELINES FOR THE SAFE PREPARATION OF SUSHI

1. HACCP Plan for the production of Sushi Rice is followed. (See HACCP Plan including Training Elements for the Production of Sushi Rice). Proper records must be maintained.
2. Documentation from fish supplier is on file regarding proper freezing of parasitic species of fish.
3. Proper temperature control of fish during receipt and storage is maintained.
4. All sushi and related ingredients are properly handled as per the "No bare hand contact with ready-to-eat foods" policy established in the Food Code. Sushi chefs shall employ the use of gloves.
5. Cross-contamination is prevented through separation of raw and RTE foods, cleaning and sanitizing of equipment and utensils between uses, and the proper covering of the bamboo mat. Additionally, ingredients are properly protected during storage.
6. Consumer Advisory statements required as per the Food Code are properly posted.
7. A PIC is present during all hours of operation.
8. Ingredients such as fresh cut vegetables and produce will be kept refrigerated at 41°F or below.
9. Bamboo mats used for product formation shall be wrapped in plastic wrap and rewrapped within 4 hours or between contact with different species of raw fish or fish and non-fish products.

# Food Employee Reporting Agreement

## Preventing Transmission of Diseases through Food by Infected Food Employees

The purpose of this agreement is to ensure that Food Employees and Applicants who have received a conditional offer of employment notify the Person in Charge when they experience any of the conditions listed so that the Person in Charge can take appropriate steps to preclude the transmission of foodborne illness.

### I AGREE TO REPORT TO THE PERSON IN CHARGE:

#### SYMPTOMS

1. Diarrhea
2. Fever
3. Vomiting
4. Jaundice
5. Sore throat with fever
6. Lesions containing pus on the hand, wrist, or an exposed body part  
(such as boils and infected wounds, however small)

#### MEDICAL DIAGNOSIS

Whenever diagnosed as being ill with *Salmonella* Typhi (typhoid fever), *Shigella* spp. (shigellosis), *Escherichia coli* O157:H7, hepatitis A virus, *Entamoeba histolytica*, *Campylobacter* spp., *Vibrio cholera* spp., *Cryptosporidium parvum*, *Giardia lamblia*, Hemolytic Uremic Syndrome, *Salmonella* spp. (non-typhi), *Yersinia enterocolitica*, or *Cyclospora cayentanensis*.

#### PAST MEDICAL DIAGNOSIS

Have you ever been diagnosed as being ill with one of the diseases listed above? \_\_\_\_\_  
If you have, what was the date of the diagnosis? \_\_\_\_\_

#### HIGH-RISK CONDITIONS

1. Exposure to or suspicion of causing any confirmed outbreak of typhoid fever, shigellosis, *E. coli* O157:H7 infection, or hepatitis A
2. A household member diagnosed with typhoid fever, shigellosis, illness due to *E. coli* O157:H7, or hepatitis A
3. A household member attending or working in a setting experiencing a confirmed outbreak of typhoid fever, shigellosis, *E. coli* O157:H7 infection, or hepatitis A

I have read (or had explained to me) and understand the requirements concerning my responsibilities under 105 CMR 590.003 Food Code and this agreement to comply with the reporting requirements specified above involving symptoms, diagnoses, and high-risk conditions specified. I also understand that should I experience one of the above symptoms or high-risk conditions, or should I be diagnosed with one of the above illnesses, I may be asked to change my job or to stop working altogether until such symptoms or illnesses have resolved.

I understand that failure to comply with the terms of this agreement could lead to action by the food establishment or the food regulatory authority that may jeopardize my employment and may involve legal action against me.

Applicant or Food Employee Name (please print) \_\_\_\_\_

Signature of Applicant or Food Employee \_\_\_\_\_ Date \_\_\_\_\_

Signature of Permit Holder or Representative \_\_\_\_\_ Date \_\_\_\_\_

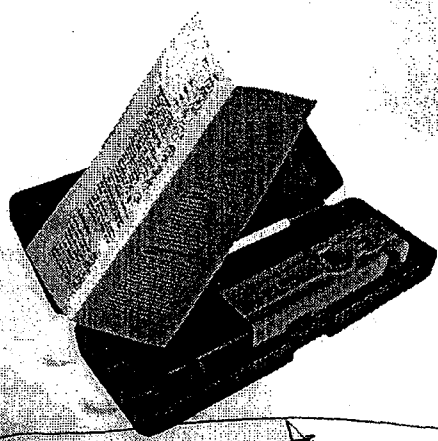
# pH600/CD600/CD601/CD610/CD611/CD97




## pH/EC & TDS Economical Pocket Testers




Milwaukee's economical testers are easy-to-use and low cost instruments to measure quick and reliable pH, EC or TDS values.

Measuring electrical conductivity is the best way of checking the amount of salt or dissolved solids (TDS) in water. Milwaukee provides you with a range of pocket testers that will allow you to measure from very low to very high conductivity solutions.

All EC/TDS testers compensate for the temperature variance automatically.



Specifications	 <b>pH600</b>	 <b>CD600</b>	 <b>CD601</b>
Range	0.0 to 14.0 pH	0 to 1990 ppm	0 to 1990 $\mu\text{S/cm}$
Resolution	0.1 pH	10 ppm	10 $\mu\text{S/cm}$
Accuracy	$\pm 0.1$ pH	$\pm 2\%$ full scale	$\pm 2\%$ full scale
Calibration	Manual, 1 point		
Temperature Compensation		automatic from 5 to 50°C	automatic from 5 to 50°C
Environment	0 to 50°C / 32 to 122°F; max RH 95%	0 to 50°C / 32 to 122°F; max RH 95%	0 to 50°C / 32 to 122°F; max RH 95%
Battery type / Batter. life	3 x 1.5V, alkaline / 700 hours of use	4 x 1.5V, alkaline / 350 hours of use	4 x 1.5V, alkaline / 350 hours of use
Dimensions / Weight	150 x 30 x 24 mm / 85 g	150 x 30 x 24 mm / 85 g	150 x 30 x 24 mm / 85 g

Specifications	 <b>CD610</b>	 <b>CD611</b>	 <b>CD97</b>
Range	0 to 10000 ppm	0 to 20000 $\mu\text{S/cm}$	0 to 1000 ppm
Resolution	100 ppm	100 $\mu\text{S/cm}$	1 ppm
Accuracy	$\pm 2\%$ full scale	$\pm 2\%$ full scale	$\pm 10$ ppm
Temperature Compensation	automatic from 5 to 50°C	automatic from 5 to 50°C	automatic from 5 to 50°C
Environment	0 to 50°C / 32 to 122°F; max RH 95%	0 to 50°C / 32 to 122°F; max RH 95%	0 to 50°C / 32 to 122°F; max RH 95%
Battery type / Batter. life	4 x 1.5V, alkaline / 350 hours of use	4 x 1.5V, alkaline / 350 hours of use	4 x 1.5V, alkaline / 350 hours of use
Dimensions / Weight	150 x 30 x 24 mm / 85 g	150 x 30 x 24 mm / 85 g	150 x 30 x 24 mm / 85 g

### Accessories

- |  |   |
|--|---|
| <b>M10004B</b> pH 4.01 buffer solution 20 mL sachet (25 pcs)               | <b>M10032B</b> 1382 ppm (mg/L) calibration solution, 20 mL (25 pcs) |
| <b>M10007B</b> pH 7.01 buffer solution 20 mL sachet (25 pcs)               | <b>M10038B</b> 6.44 ppt (g/L) calibration solution, 20 mL (25 pcs)  |
| <b>M10010B</b> pH 10.01 buffer solution, 20 mL sachet (25 pcs)             | <b>M10080B</b> 800 ppm calibration solution 20 mL (25 pcs)          |
| <b>M10030B</b> 12880 $\mu\text{S/cm}$ calibration solution, 20 mL (25 pcs) | <b>MA9015</b> Electrode storage solution, 230 mL                    |
| <b>M10031B</b> 1413 $\mu\text{S/cm}$ calibration solution, 20 mL (25 pcs)  | <b>MA9016</b> Electrode cleaning solution, 230 mL                   |
|  | <b>M10000B</b> Electrode rinse solution, 20 mL (25 pcs)             |

### Ordering Information

pH600, CD600, CD601, CD610, CD611 and CD97 are supplied complete with protective cap, calibration screwdriver, batteries and instructions.

**GUARANTEED**

# pH600

# pH600

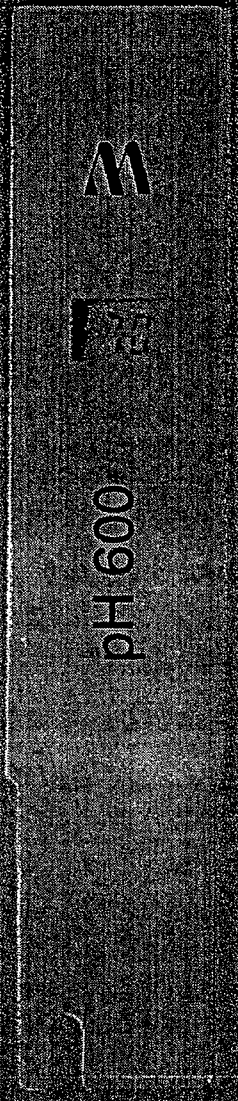
Pocket-sized  
pH Meter

### SPECIFICATIONS:

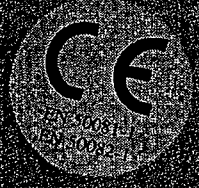
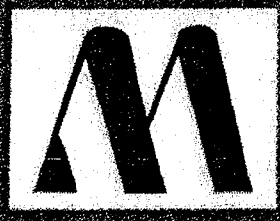
RANGE	0.0 to 14.0 pH
RESOLUTION	0.1 pH
ACCURACY (@20°C)	±0.1 pH
TYPICAL EMC DEVIATION	±0.2 pH
ENVIRONMENT	0 to 50°C 95% RH
BATTERIES LIFE	3 x 1.5V alkaline approx. up to 700 hours of use
DIMENSIONS	150x30x24 mm
WEIGHT	85 g

### ACCESSORIES:

- MA9015 Storage solution (220 ml)
- MA9016 General cleaning solution (220 ml)
- MA9300 1.5V battery (10pcs)
- MA9701 Calibration screwdriver (20 pcs)
- M10000B Rinse solution deionized water 20 mL sachet (25 pcs.)
- M10004B pH 4.01 20mL sachet buffer solution (25 pcs.)
- M10007B pH 7.01 20mL sachet buffer solution (25 pcs.)
- M10010B pH 10.01 20mL sachet buffer solution (25 pcs.)

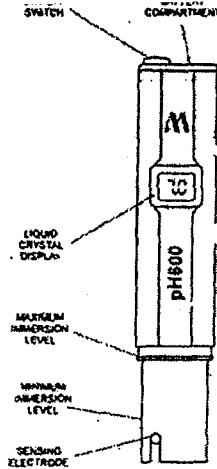


*Authorised Dealer*

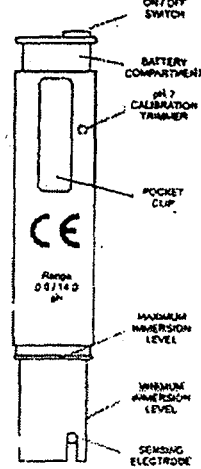


**M Milwaukee**

**Milwaukee**  
Buy from the Source and Save Money!



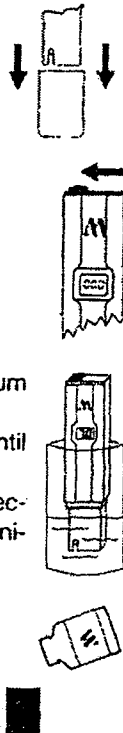
FRONT



BACK

**OPERATING:**

- Do not be alarmed if white crystals appear around the cap. This is normal with pH electrodes and they dissolve when rinsed with water.
- Remove the protective cap and turn the pH600 on.
- Immerse it into solution up to the maximum immersion level.
- Stir gently and wait until the display stabilizes.
- After use, rinse the electrode with water to minimize contamination.
- Store the electrode with a few drops of storage solution (MA9015) or pH 7.01 buffer solution in the protective cap.
- Always replace the protective cap after use.



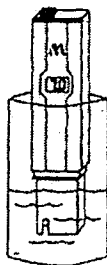
DO NOT USE DISTILLED OR DEIONIZED WATER FOR STORAGE PURPOSES.

- Large differences in pH readings ( $\pm 0.5$  pH) could be due to lack of calibration, dry electrode or run-down batteries.

**CALIBRATION:**

The calibration procedure is very simple and fast.

- Immerse the tester up to the maximum level in pH 7 buffer (M10007).
- Allow the reading to stabilize and using a small screwdriver turn



the pH 7 Calibration Trimmer to read 7.0.

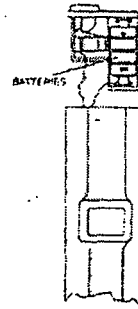


Calibration is now complete.

ALWAYS USE FRESH BUFFERS FOR CALIBRATION & NEVER REUSE THEM.

**BATTERY REPLACEMENT:**

When the pH600 cannot be switched on or the display fades, pull out the battery compartment and replace all three 1.5V batteries, paying attention to their polarity.



Batteries should only be replaced in a non-hazardous area using the battery types specified in this instruction manual.

**RECOMMENDATIONS FOR USERS:**

Before using this product, make sure that it is entirely suitable for the environment in which it is used. Operation of this instrument in residential area could cause unacceptable interferences to radio and TV equipments, requiring the operator to take all necessary steps to correct interferences.

The glass bulb at the end of the pH electrode is sensitive to electrostatic discharge. Avoid touching this glass bulb at all times. During operation of instrument, ESD wrist straps should be worn to avoid possible damage to the pH electrode by electrostatic discharge. Any variation introduced by the user to the supplied equipment may degrade the instrument's EMC performance. To avoid electrical shock, do not use this instrument when voltages at the measurement surface exceed 24 VAC or 60 VDC. To avoid damages or burns, do not perform any measurement in microwave ovens.