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# INSTRUMENT STANDARD OPERATING PROCEDURE MANUAL

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College of Medicine



SAFETY AND LABORATORY COOMMITTEE, C.O.M, K.F.U.

**Prepared by**

Document Number	Name	Signature	Date
CM/PHA-026	Lolwa Al helal Nourah Alshebli		
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**Document History**

Document Section	Details of Amendments	Date	Modified by (Initials)
SOP	First Draft on SOP for the operation of PH Meter	2-12-2020	Lolwa Al helal Nourah Alshebli

## 1. OBJECTIVE

The document describes the operation of PH Meter

## 2. SCOPE

The Hanna pH 210, pH 211, pH 212 and pH 213 are microprocessor-based pH and Temperature bench meters. pH 211 and pH 213 can also measure ion concentration (ISE) and Oxidation Reduction Potential (ORP) in the mV range. pH measurements are compensated for temperature effect manually or automatically with the HI 7669/2W temperature probe. The instrument is equipped with a large easy-to-read LCD which shows the pH (or mV) and temperature simultaneously, together with graphics symbols. The calibration process is guided step by step through clear indications on the LCD. A stability indicator makes the calibration procedure error-free. Through the RS232 serial port data can be transferred to a PC (pH 212 and pH 213 only)

## 3. RESPONSIBILITIES

- ☐ It is the responsibility of designated personnel in the lab to train staff and students on this procedure and to ensure adherence to this procedure under supervision.
- ☐ It is the responsibility of designated personnel (staff or Student) to follow the instructions of this procedure under supervision.

## 4. REFERENCES

- ☐ <https://www.manualslib.com/manual/464573/Hanna-Instruments-Ph-211.html?page=2#manual>

## 5. DEFINITIONS

Each instrument is supplied with:•

HI 1131B Glass-body Combination pH Electrode•

HI 7669/2W Temperature Probe•

HI 76404 Electrode Holder•

pH 4.01 & 7.01 Buffer Solutions, 20 mL each•

HI 7071S Electrolyte Solution• 12VDC Power Adapter•

## 6. SAFETY PRECAUTIONS

- ☐ Mention the safety precautions to be taken while carrying out any work.

## 7. PROCEDURE FOR OPERATING **PH Meter**

### 7.1. Turning on the instrument:

- ☐ Xx
- ☐ Xx

### 7.2. Software Operation.

### 7.3. Steps of the Procedure

- ☐ Xx
- ☐ Xx
- ☐

### 7.4. Turning off the Instrument

- ☐ Xx
- ☐ Xx
- ☐

### 7.5. Warning

**Write any the warning in BOLD and RED FONT.**

