

STANDERD OPERATING PROCEDURE

pH METER



OBJECTIVE:

- The purpose of this Standard Operating Procedure (SOP) is to describe the procedure for Operation and Calibration of PH Meter. Mark: Labman, Model: LMPH – 12, Serial No: L35617

SCOPE:

- This SOP is applicable to PH Meter in the Zoology Department at GGV, Bilaspur manufacturing facility.

STANDARD ACCESSORIES:

- pH Meter, pH Electrode, pH Buffers, (pH 4.01, 7.00, 10.01) Temperature Probe, Electrode Stand, 5V USB Adaptor Instruction Manual.

PRELIMINARY CHECK:

- Check that the instrument is clean and free from dust, if not; clean with a soft cloth duster.
- Always preserve the electrode in pH 4.0 Buffer. Do not leave it the electrode in purified water. (OR as per the storage condition is given in the manual of the electrode)

PRECAUTIONS FOR USE PH METER:

- The procedure should be taken from the User Manual.
- Ensure that the instrument is cleaned before use. If not, clean it. Clean the instrument after use.
- Check that the instrument is connected to the main power supply.
- Do not expose the instrument to any type of magnetic field.
- Do not unplug the power when the instrument is on. First, switch off the instrument before unplugging.
- Check the instrument is kept on the vibration-free table/platform.

BASIC OPERATION:

- Connect the pH meter to the main power supply and switch ON the instrument.
- Check the LCD Display status after power on- main screen.
- Press the RESET key and check the system resets and initializes.
- Press active keys on the front panel & check for the buzzer beeps.
- The instrument is now ready for use.
- Set up the electrode stand & fit the pH electrode into it.

pH MEASUREMENTS:

- Operate the instrument as per the procedure mentioned above.
- Rinse the electrode with distilled water and dip it in the Sample and Note the reading.
- Cleaning Procedure:
 - Daily clean the instrument with a dry lint-free cloth or using tissue paper.
 - Always rinse the electrode before and after use.
 - Soak the tip of the electrode in 0.1 M Hydrochloric acid for one hour then rinse the electrode.
- If any error observes in operation/calibration, inform to Section head or authorized Designee for necessary action.

PH METER MAINTENANCE:

- Regular maintenance schedule and proper storage of Ph electrode will minimize performances and help to extend the life of the electrode.
- Inspect electrode for scratches, cracks salt crystals built up on membrane/liquid junction deposits.
- Use a dedicated electrode storage solution (Buffer 4.01) to keep the electrode in proper working order.
- Constant use of this solution will keep the electrode ready to use and provide a fast stable response.

ACCEPTANCE CRITERIA:

- The pH value should be ± 0.05 of the specific value for the standard buffer solutions.
- Slope %: 90 % to 105 %.