	KATHMANDU UPATYAKA KHANEPANI LIMITED	No.
	STANDARD OPERATING PROCEDURE	
	ELECTRIC CONDUCTIVITY HAANNA HI2003	Effective Date: Revision No: 00

1. **Scope**

   To provide a standard operating procedure for determining the electric conductivity of water samples following Standard Methods.

2. **Principle**

   The ability of water to conduct an electric current is known as electric conductivity (EC) and depends on the concentration of ions in solution.

3. **Sampling and Preservation**

   - Collect samples in clean glass bottles.
   - Analyze the samples immediately. The samples cannot be preserved for later analysis.

4. **Equipment / Apparatus**

   - EC meter HANNA HI2003
   - Soft tissue paper
   - 50mL beaker or 100mL beaker

5. **Reagents**

   - Distilled water
   - Calibration standard 1,413 μS/cm.

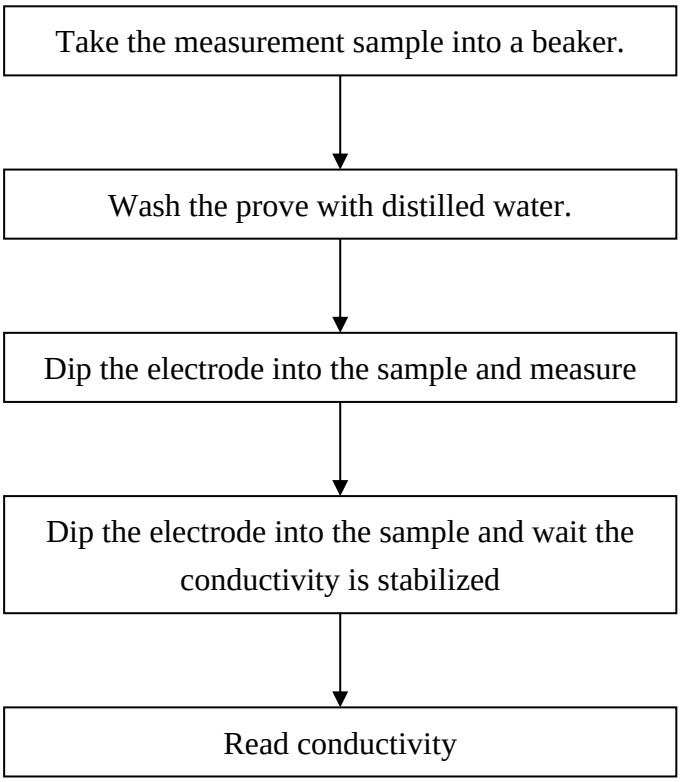
6. **Procedure**

   Calibration

   i) Take the calibration reagent into a beaker.
   ii) Rince the prove with distilled water then soak in the calibration solution.
   iii) Press CAL/MODIFY key.
   iv) Wait until the EC meter stabilizes and the “WAIT” indicator appears.
   v) When the reading is stabilized and close to 1,413μS/cm, “CFM” tag will blink.
   vi) Press GLP/CFM key.

   Note: Calibration should be done daily before EC measurement.

Measurement



7. Data quality management and data reporting.

- Calculate RPD value and check the data precision.

RPD= (Max. value – Min. value) / Average x 100 (%)

- If RPD value exceeds 10%, measure one more time (the 3rd measurement).
- Select two (2) data that are close and recalculate RPD
- If RPD value exceeds 10%, measure one more time (the 4th measurement).
  ***Note*:** If RPD value remains large, suspect contamination of sample cell and clean sample cell.

- Calculate average value using the data set (two (2) datas) that satisfies RPD value < 10%.
- Calculated average value using data set which satisfies RPD <10% is reported as the measurement value.

8. Daily maintenance

- Cleaning prove after use.

Written by:		Signature/Date:
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