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and

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and

Fisheries and Oceans Canada
Sea Lamprey Control Centre
1219 Queen Street East
Sault Ste. Marie, Ontario P6A 2E5
Canada

INSTRUMENT OPERATING PROCEDURE

INSTRUMENT:

Ammonia Photometer

MODEL:

HI97700

MANUFACTURER:

Hanna Instruments

PRECAUTIONS:

POTENTIAL INTERFERENCES


Use a clean cuvette for all readings.

Use a lens cleaning cloth when using cuvettes.

SAFETY

No special safety precautions.

PROCEDURES:

- I. Preparation of the Hanna Photometer for use. Photometer is equipped with a tutorial mode that will walk user through the steps of the analysis.
- A. Turn on the On/Off switch. Verify that the display becomes active, if tutorial mode is enabled, a pop-up window will indicate that mode. The correct units for this measurement should be mg/L NH₃. Ensure NH₃ is displayed, not NH₃-N or NH₄⁺. To toggle tutorial mode on/off or change units, press  and change the chemical form for the units or the “setup” menu for the tutorial mode.
- B. The home screen will be displayed showing “ - - - - mg/L, Ammonia LR (NH₃)” when the photometer is ready.
- C. Calibration should be checked approximately every month. The kit should include 2 standards: a zero, and a 1.5 mg NH₃-N. To check the calibration, from the home menu, zero the instrument using the zero standard, then read the 1.5 mg/L standard. Make sure the units are NH₃-N. If the reading is outside of 1.45-1.55, re-calibrate the unit by pressing “CAL Check” and “Calibrate”. Follow the instructions.
- II. Sample Procedure.
1. On the home screen touch “Measure” to begin. If tutorial mode is enabled, you will see “Step 1/15...”. Follow the steps as displayed pressing “Next” as you complete them. The steps will be the same as follows.
 2. Fill a cuvette to the line (10 ml). Cap cuvette, dry and clean the cuvette.
 3. Insert cuvette into photometer and spin until the cuvette drops into its seat.
 4. Press “Zero”.
 5. Remove cuvette from photometer and add 4 drops of Reagent A. Replace cap and invert 5 times to mix well.
 6. Add 4 drops of Reagent B, replace cap, and invert 5 times to mix well. Dry and clean side of cuvette.
 7. Insert cuvette into photometer and spin until the cuvette drops into its seat.
 8. Press “Read”. A 3 minute 30 second timer will start, and a reading will automatically be taken when the timer expires.
 9. Value will be reported to 2 decimal places.

MAINTENANCE:

- A. Minimal maintenance is required or possible.
- B. Troubleshooting is available in the User manual.

REFERENCE:

HI97700 Ammonia Low Range Photometer Instruction Manual

This procedure has been reviewed and approved by the undersigned representatives of the U.S. Fish and Wildlife Service and Fisheries and Oceans Canada.

REVIEWED/APPROVED _____ DATE _____
Program Manager (Canada)

REVIEWED/APPROVED _____ DATE _____
Field Supervisor (US)