Hammond Bay Biological Station
11188 Ray Road
Millersburg, MI 49759

STANDARD OPERATING PROCEDURES
LABORATORY

PROCEDURE TITLE: Receipt, Identification, Storage, and Handling of TFM and Niclosamide Analytical Standards.

DEFINITION OF TERMS

LAMPRICIDE ANALYTICAL STANDARD: The Analytical Standard is a commercially prepared high purity formulation (usually ≥99% pure) of 3-trifluoromethyl-4-nitrophenol (TFM) or Niclosamide. The analytical standard must be accompanied by a certificate of analysis (COA) stating the purity, and a material safety data sheet (MSDS).

PROCEDURES:

A. Receipt and Identification

1. Upon receipt of material, inspect the package and contents to determine that the vessel containing the analytical standard is undamaged, and that the COA and MSDS are included.

   a. If damage to the vessel has occurred, the analytical standard will be returned and replaced.
   b. If COA and/or MSDS are not included in package, contact supplier and request.
   c. File the MSDS in the appropriate MSDS folder located in the main lab.
   d. Place the COA in the chemical usage log.

2. After receiving the analytical standard in satisfactory condition, prepare a Chemical Usage Log (attachment 1) and record the following information:

a. Date of receipt
b. Manufacturer
c. Name of the analytical standard
d. Quantity
e .Purity
f. Lot number
g. The physical characteristics of the analytical standard
h. The Chemical Abstracts Service number (CAS)

3. The Chemical Register and User Log book will contain sufficient pages to record all amounts of all chemicals used on all research as well as the following items in the order listed:
   a. A copy of this standard operating procedure
   b. Lined, blank pages for recording usage entries (see attached Form 1)

4. The original weight of the chemical and container, with cap, will be determined by weighing it on an appropriate balance. Record this weight on the Chemical Usage Log.

B. Storage of Analytical standard

1. The analytical standard will be stored in a secured area under non-hazardous conditions and with low potential for degradation. Normally, this will be in a freezer or vault that is cool, dry, ventilated, and darkened.

C. Handling of the Analytical standard

1. If the analytical standard is stored in a freezer, allow it to come to ambient temperature before weighing and withdrawing subsamples.
2. Before each use, the initial weight of the analytical standard and its container shall be determined by weighing it on an appropriate balance. Record in the Chemical Usage Log. Note: Containers should be weighed with the cover on the container. If this is not done, indicate on the log that the container without the cover was weighed.
3. The amount of chemical taken from the container will be weighed into the appropriate tared vessel and the weight will be recorded on the Chemical Usage Log.
4. After the chemical has been withdrawn from the storage container,

reweigh the container and its contents and record all information on the Chemical Usage Log.

5. Repeat Steps 2, 3, and 4 each time the chemical is removed.
6. Return the remaining chemical to the storage area.
7. When the Chemical Usage Log is full or when all chemical has been used, the log shall be archived in the Laboratory facility archives.

D. Verification of the Purity of the Analytical Standard.

1. The purity reported by the manufacturer of the standard will be verified before the standard is used. This is done by HPLC method. See HBBS SOP 303.7 for the specifics regarding the determination of Niclosamide concentration and HBBS SOP 322.6 for the determination of TFM concentration.
2. Determine % purity by preparing a sample of any concentration and comparing total peak area of TFM or Niclosamide to peaks of unknown origin, totaling 100% when added together. The HPLC software will determine % of the total peak area for the user.