MINUTES

ANALYTICAL REVIEW OF BIO-TEST
FOUR DAY FISH TOXICITY STUDIES

(IBT NO. A7204)

Bio-Test Laboratories
1810 Frontage Road
Northbrook, Illinois
60062

July 31, 1969

TO:

| Those Present | Not Present |
|---|---|
| R. E. Keller | W. R. Richard |
| E. P. Wheeler | M. W. Farrar |
| E. S. Tucker | |

The above attendees reviewed the attached analytical results with Messrs. J. C. Calandra, O. E. Fancher, J. Plank and C. Mastri at Bio-Test Laboratories.

MONS 030207

It was agreed that cross-contamination of water and fish samples had occurred at some stage of the 96 hour exposure experiments carried out at Bio-Test Laboratories. In spite of the contamination problems, the study provided the following important pieces of information.

1. All Aroclors tested appear to be much less toxic to fish than DDT.

2. To obtain reproducible and realistic biological and analytical results:

   - the solubility limit of Aroclors in water should not be exceeded by such a large factor.

   - a stable level of Aroclor should be established in the water before the addition of the fish.

   - exposure vessels should be all glass.

The following actions were agreed upon:

1. Monsanto (Tucker) will determine how a stable Aroclor-water solution is best prepared.

2. Monsanto (Tucker) will determine container effects, if any, on the stability of Aroclor-water solutions. (Container to be supplied by Bio-Test.)

3. The methods developed to prepare Aroclor saturated water will be sent to Bio-Test to check for equivalent results at different sites.

4. Upon successful completion of the above, 96 hour fish exposure experiments will be carried out by Bio-Test as shown on the attached project write-up agreed upon at the meeting.

MONSANTO - BIO-TEST FOUR DAY FISH TOXICITY STUDIES

KEY ISSUE: Establish Safety of Aroclors in the Environment.

OBJECTIVES OF PROJECT: Determine the toxicity of Aroclors to fish to provide data for a favorable published comparison with pesticides (DDT) and other materials.

Test Materials: Control
Aroclor 1242, Lot #AK-255
Aroclor 1254, Lot #AK-38
Aroclor 1260, Lot #AK-3
Aroclor 5460, Lot #AK-390
Technical DDT (2-1/2#) B0903604

Test Level: To be determined

Test Species: Rainbow Trout (Salmo Gairdnerii)
Bluegills (Lepomis Macrochirus)

Test Conditions: As described before; 10 trout in each 10L bioassay vessel and 10 bluegills, 5 in each 10L bioassay vessel.

Samples for Monsanto Residue Analysis:

Water -

100 ml., taken at 0 (before addition of fish), 24, 48, 72 and 96 hours. With bluegills, a 50 ml. sample will be taken from each bioassay vessel and combined. Samples will be stored in foil lined, amber glass bottles and will be shipped to Monsanto for analyses upon completion of the test.

Fish -

All mortalities will be collected at 24, 48, 72 and 96 hour periods, washed and quick frozen in poly-bags. Survivors of the 96 hour exposure will be sacrificed, washed and quick frozen.

Afternoon discussions centered around the progress of other feeding studies being carried out at Bio-Test and the scheduling of samples for residue analysis.

E. S. Tucker

EST:db
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