FISH TOXICITY LABORATORY REPORT
Animal Biology Laboratory
EPA-PR, ARC, Beltsville, Md.

Test Number: 678 I.D. Number: NB 283
Product: Agri-Strep EPA Reg. No.: 618-28-AA
Manufacturer: Merck Chemical Division, Test Method: TSD 1.206 (12/73)
Merk Company
Active Ingredients: Streptomycin 21.2%
Inert ingredients: 78.8%

Date Product Received: February 19, 1974
Biologist Conducting Test: Fredrick Pitcher
Test Species: Rainbow trout (Salmo gairdneri)
Condition: Excellent
  Average length: 38.7 mm.
  Average weight: .48 gm.
Source: Wytheville National Fish Hatchery
  Date received: February 13, 1974  Acclimation temperature: 55 °F
Bioassay Conditions:
  Test vessel: 5-gallon glass jar.  Water volume: 15 l
  Fish/vessel: 10  Fish/concentration: 10  Concentrations tested: 3
Water Quality:
  Test Water: Demineralized water 1,000,000 ohms resistivity reconstituted
to U.S. Fish and Wildlife Service Standards.
  Temperature: 55 °F  pH: 7.0
  Alkalinity: 41.04 ppm.  Total hardness: 51.3 ppm.
  Calcium hardness: 17.1 ppm.  Dissolved O2: 6.0 ppm.
  Dissolved CO2: < 10 ppm.

Purpose:
  To determine the toxicity of Agri-Strep (Reg. no. 618-28 AA) to rainbow trout.
Fish Pretest History:

Upon arrival at the Laboratory, the fish were placed in a plastic swimming pool of approximately 570 gallons capacity. Water in the pool was maintained at a temperature suitable for the species of fish and aerated continuously. The water was recirculated through a sand filter approximately once per hour.

The fish were fed commercial trout chow while at the Laboratory. They were not treated with a prophylactic chemical at anytime.

No tests were made on these fish until they had undergone a minimum 10-day-observation period.

Acclimation:

Three days prior to testing, fish from 35 to 75 mm. in length were sorted from the stock tank and placed in acclimation tanks containing the quality and temperature of water to be used during the test. The fish were not fed after being taken from the stock pool.

Test Procedure:

The handling of the fish and the organization of the tests followed procedures described in Doudoroff (1951), Lennon (1964) and the Fish Pesticide Acute Toxicity Test Method as developed by the Animal Biology Staff, Pesticides Regulation Division, ARS in August 1956. Test results were analyzed and the LC 50 concentrations were computed by use of the Litchfield and Wilcoxon (1949) method.

The bio-assay tests were made in 5-gallon-glass jars containing 15 liters of reconstituted water. Fish were placed in each jar one day before the test chemicals were added. Twenty fish were tested at each concentration. The stock solutions* of chemicals were mixed within 1 hour of the start of the test. The aliquot of chemical necessary to obtain the desired concentration of toxicant was added to the test jars and immediately stirred into the water to ensure an even distribution. All toxicity levels presented in this paper are based on the amount of active ingredients** present in the test solutions unless indicated otherwise.

The reaction of the fish to the toxicant was recorded at elapsed times of 3/4, 1 1/2, 3, 6, 12 and 24 hours. Readings were taken at 24-hour intervals after the first day of the test period. Observations made at non-scheduled intervals were also recorded.

* Direct application.

** Total formulation.
Agri-Strep was added directly to obtain test concentrations of 180, 100 and 56 ppm.

No mortality occurred at any concentration during the 96-hour test.

**Conclusion:**

Agri-Strep can not be expected to kill rainbow trout at a concentration of 180 ppm formulation within 96 hours of exposure.

Test conducted by,

Fredrick G. Pitcher
Biologist

Test approved by,

John A. McCann
Laboratory Supervisor
FISH TOXICITY LABORATORY REPORT
Animal Biology Laboratory
EPA-PR, ARC, Beltsville, Md.

Test Number: 678
Product: Agri-Strap
I.D. Number: MB 283
EPA Reg. No.: 618-28-4A

Manufacturer: Merck Chemical Division,
Merck Company

Active Ingredients: Streptomycin Sulfate 21.22
Inert ingredients: 78.82

Test Method: TSD 1.206 (12/73)

Date Product Received: February 19, 1974

Period of Test: March 20 - 24, 1974

Biologist Conducting Test: Frederick Pitcher

Test Species: Rainbow trout (Salmo gairdneri)

Condition: Excellent
Average length: 23.7 mm.
Average weight: 46 gm.

Source: Wyeheville National Fish Hatchery

Date received: February 22, 1974
Acclimation temperature: 55°F

Bioassay Conditions:

Test vessel: 5-gallon glass jar.
Water volume: 15 L
Fish/vessel: 10
Fish/concentration: 10
Concentrations tested: 2

Water Quality:
Test Water: Demineralized water 1,000,000 ohms resistivity reconstituted
to U.S. Fish and Wildlife Service Standards.

Temperature: 55°F
Alkalinity: 41.94 ppm.
Calcium hardness: 17.41 ppm.
Dissolved CO₂: < 10 ppm.

pH: 7.0
Total hardness: 51.2 ppm.
Dissolved O₂: 6.0 ppm.

Purpose:
To determine the toxicity of Agri-Strap (Reg. no. 618-28-4A) to rainbow trout.
Fish Pretest History:

Upon arrival at the laboratory, the fish were placed in a plastic swimming pool of approximately 570 gallons capacity. Water in the pool was maintained at a temperature suitable for the species of fish and aerated continuously. The water was recirculated through a sand filter approximately once per hour.

The fish were fed commercial trout chow while at the laboratory. They were not treated with a prophylactic chemical at anytime.

No tests were made on these fish until they had undergone a minimum 10-day-observation period.

Acclimation:

Three days prior to testing, fish from 35 to 75 mm. in length were sorted from the stock tank and placed in acclimation tanks containing the quality and temperature of water to be used during the test. The fish were not fed after being taken from the stock pool.

Test Procedure:

The handling of the fish and the organization of the tests followed procedures described in Doudoroff (1951), Lennon (1964) and the Fish Pesticide Acute Toxicity Test Method as developed by the Animal Biology Staff, Pesticides Regulation Division, ARS in August 1966. Test results were analyzed and the LC 50 concentrations were computed by use of the Litchfield and Wilcoxon (1949) method.

The bio-assay tests were made in 5-gallon-glass jars containing 15 liters of reconstituted water. Fish were placed in each jar one day before the test chemicals were added. Twenty fish were tested at each concentration. The stock solutions* of chemicals were mixed within 1 hour of the start of the test. The aliquot of chemical necessary to obtain the desired concentration of toxicant was added to the test jars and immediately stirred into the water to ensure an even distribution. All toxicity levels presented in this paper are based on the amount of active ingredients** present in the test solutions unless indicated otherwise.

The reaction of the fish to the toxicant was recorded at elapsed times of 3/4, 1 1/2, 3, 6, 12 and 24 hours. Readings were taken at 24-hour intervals after the first day of the test period. Observations made at non-scheduled intervals were also recorded.

* Direct application.

** Total formulation.
Agri-Strep was added directly to obtain test concentrations of 180, 100 and 56 ppm.

No mortality occurred at any concentration during the 96-hour test.

**Conclusion:**

Agri-Strep can not be expected to kill rainbow trout at a concentration of 180 ppm formulation within 96 hours of exposure.

Test conducted by,

Fredrick G. Pitcher
Biologist

Test approved by,

John A. McGann
Laboratory Supervisor
Test Number: 84
Sample Number: MB 283
Trade Name: Agri-Strep
Active Ingredients:
Type Material
Solvent Used: H2O
Stock Solutions I: Direct
II
III
Remarks
Test Species: RT
Source
Condition
Length (mm): 78.7
Weight (gm): 48
Bioassay Vessel Size
Loading (gm/l)
Specimen/Vessel
Water Temp.
D
CO2
D.O
pH
Alk.
Hard.
Conductivity

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Data fraction = total number dead/number tested per vessel