1. Chemical: SC-0224

2. formulation: Trimethylsulfonium carboxymethylaminomethylphosphate 20.0% ai.

3. Citation: Fletcher, D.W. 1982. "8-Day Dietary LC_{50} Study withSC-0224 Technical in Bobwhite Quail", Unpublished study prepared by Bio-Life Associates Ltd., Neillsville, Wisconsin, for Stauffer Chemical Co., Farmington, Conn.

4. Revewied by: Miachel Rexrode
Biologist
OPP/HED/EEB

5. Date Reviewed: June 22, 1983

6. Test Type: 8-Day avian dietary

Test species : Bobwhite quail

7. Reported Results: The dietary median lethal concentration of the test material was in excess of 5000 ppm.

8. Reviewers Evaluation: This test appears to be scientificallyl sound and with an LC_{50} >5000 ppm, SC-0224 appears to be practically non-toxic to bobwhite quail. This study fulfills Guideline requirements for registration.

1/ Test material was corrected to 100% activity

9. Methods/Materials

Birds were received at 5 days of age from Bio-Life's own colony and placed on a 9-day observation period. Animals were divided into 5 vehicle control groups and 5 test groups of 10 birds each. Birds were weighed at day 1 and again on day 8. Food consumption was recorded for each group during 5-day test period and during the 3-day recovery period.

Test material was incorporated into a standard diet (Purina Gamebird Startena) and fed to birds at dietary levels of 312, 625, 1,250, 2,500 and 5,000 ppm. Controls were given standard laboratory diet.

Birds were housed in 45.7 cm x 61 cm x 45.7 cm wire pens (10 birds per pen) in an environment maintained at about 90°-100°F. Lighting amounted to 24 hours of Flourescent light per day. Relative humidity was around 42-50% during testing.

Mortality data is listed in Table 1. No abnormal behaioral reactions or systemic signs of toxicity were noted in birds fed SC-0224 technical or the control birds.

Table 1. 8-day dietary LC_{50} study - Bobwhite Quail Mortality Data.

Dietary level (ppm)	number dead / number tested	percent dead
Controls	0/10	0
312	0/10	0
625	0/10	0
1,250	0/10	0
2,500	0/10	0
5,000	0/10	0

Test group food consumption during the test and recovery periods was slightly lower in all test groups when compared to controls. Control bird food consumption ranged from 5.3 to 5.7 grams/bird/day as copmared to test birds food consumption of 4.0 - 5.0 grams/bird/day.

10. Reviewrs Conclusion: This test appears scientifically sound and will support registration. Statistical analysis was unnecessary, since, no mortality occurred at levels of 5000 ppm. Test material was corrected to 100% active.

Category: Core

Repairability: NA

Rationale: NA

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1. Chemical: SC-0224

2. Formulation: Trimethylsulfonium carboxy-methylaminomethylphosphate 20.0% ai.

3. Citation: Fletcher, D.W. 1982. "8-day dietary study with SC-0224 Technical," Unpublished study prepared by Bio-Life Associates Ltd., Neillsville, Wisconsin, for Stauffer Chemical Co., Farmington, Conn.

4. Reviewed by: Miachel Rexrode
Biologist
OPP/HED/EEB

5. Date Reviewed: June 22, 1983

6. Test Type: 8-day avian dietary

Test Species: Mallard Duck

7. Reported Results: The LC_{50} value was determined to be in excess of 5,000 ppm.

8. Reviewers Evaluation: This test appears to be scientifically sound and with an LC_{50} >5000 ppm, SC-0224 appears to be practically non-toxic to mallard ducklings. This study fulfills Guideline requirements for registration.

Methods/Materials

Birds were received at 1 day of age from Bio-Life's own colony and placed on a 16-day observation period. Following this acclimataintion, birds were randomly selected form the population and arbitrarily assigned to test roups (lo per concentration level).

All birds were housed in 121.9 cm x 61 cm x 121.9 cm wire pens. Lighting was provided by Fluorescent Fixtures that were left on 24 hours per day. Environmental testing parameters were as follows: relative humidity, 67.6% (53-78%); dry bulb temperature, 76.6°F (73-84°F); wet bulb temperature, 68.6°F (65-74°F); minimum temperature, 68.6°F (f1-73°F); maximum temperature, 92.4°F (89-96°F).

The material to be tested (SC-0224 tech) was incorporated into a standard laboratory diet (Purina Gamebird Startena, Ralston Purina, St. Louis, Mo.) Following the 5-day test period, all birds were removed from their respective treated diets and placed on plain feed for a 3-day recovery period.

No abnormal behavioral reactions or systemic signs of toxicity were noted in birds given SC-0224 or the vehicle control birds. Gross pathological examination of selected birds sacrificed on day 8 revealed no abnormal tissue alterations. No mortality occurred in any of vehicle or test groups during the investigation. The above data are presented in Table 1.

Table 1. Mortality data during 8-day dietary LC_{50} study on mallard ducks. Test material: SC-0224 Technical.

Dietary Level ppm	number dead / number tested	percent dead
Controls	0/10	0
312	0/10	0
625	0/10	0
1,250	0/10	0
2,500	0/10	0
5,000	0/10	0

Reviewers Conclusion: This test appears to be scientifically sound and will support Guideline requirements.

Category: Core