

US EPA ARCHIVE DOCUMENT

1. Chemical: SC-0224
2. formulation: Trimethylsulfonium carboxymethylaminomethylphosphate
20.0% ai.
3. Citation: Fletcher, D.W. 1982. "8-Day Dietary LC₅₀ Study with SC-0224
Technical in Bobwhite Quail", Unpublished study prepared by
Bio-Life Associates Ltd., Neillville, 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 : 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 scientifically sound and
with an LC₅₀ >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 Fluorescent light per day. Relative humidity was around 42-50% during testing.

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

Table 1. 8-day dietary LC₅₀ study -
Bobwhite Quail Mortality Data.

Dietary level (ppm)	<u>number dead</u> <u>number tested</u>	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 compared to test birds food consumption of 4.0 - 5.0 grams/bird/day.

10. Reviews 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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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 LC₅₀ value was determined to be in excess of 5,000 ppm.
8. Reviewers Evaluation: This test appears to be scientifically sound and with an LC₅₀ >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 acclimatation, birds were randomly selected from the population and arbitrarily assigned to test groups (10 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 (61-73°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 LC₅₀ 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