

US EPA ARCHIVE DOCUMENT

6-19-80

DATA EVALUATION RECORD

1. Chemical: Formetanate (Carzol SP)
2. Formulation: Formetanate hydrochloride 92%
3. Citation: Graspenthian, J. R., D. Hathaway, M. L. Keplinger and O. E. Fancher. August 3, 1971. Acute aerosol inhalation toxicity study with Carzol SP in Bobwhite Quail. Prepared by Industrial Bio-Test Labs, Inc. (Report # N256). Submitted to Nor-Am Agricultural Products, Inc.
4. Reviewed by: Elizabeth E. Zucker
Wildlife Biologist
EEB/HED
5. Date Reviewed: June 19, 1980
6. Test Type: Acute Aerosol inhalation
Test Species: Bobwhite Quail
7. Reported Results:

Ten bobwhite quail were exposed for four hours to a 1.2% aqueous suspension of Carzol SP in an acute inhalation study. An average concentration of 38.7 mg/liter of air was passed through the exposure chamber. No mortalities or toxic symptoms were observed in any of the birds during the 14-day observation period.

8. Reviewer's Conclusions:

This study is scientifically sound but does not contain information relevant to registration. Also, there was no monitoring of aerosol material to indicate that the compound was actually available to the test organisms.

Materials/Methods

Test Procedures:

Ten young quail (5 males and 5 females) were housed in groups of five (sexes separate). Animals were fed and watered ad libitum, except during the inhalation exposure period.

Test animals were exposed in a 70-liter Plexiglas inhalation chamber for four hours. After exposure, they were returned to their pens and observed for toxic symptoms for a 14-day period.

A 1.2% aqueous suspension (pH 7.0) was used. This was equal to 10 pound/acre. An Ohio Ball-Jet Nebulizer was used to send a stream of dry air and aerosol mixture into the top of the chamber. Exhaust was at the bottom of the chamber. Air flow rate - 6.6 l/minute at 29.92 inches of Hg and 25°C. Atmosphere - 23°C and 29.32 inches Hg. Average nominal aerosol concentration (Nebulizer weight loss/total volume of air used during test) was 38.7 mg/L.air.

Statistical Analysis: None was performed.

Discussion/Results:

No mortalities or toxic symptoms were observed in any of the quail during the two-week observation period.

Materials/Methods

1. Test Procedures:

There are no specified EPA guidelines for avian inhalation testing, however, the following is noted:

- a. The age of the test quail are not reported.
- b. It was not stated whether or not all birds were exposed to the toxicant at the same time or at separate intervals.
- c. There was no monitoring of test material in the inhalation chamber to determine if animals were actually being exposed to the toxicant. (This is normally done in inhalation studies to ensure the test material is actually found in the chamber.)

2. Statistical Analysis: No analysis was performed.

3. Discussion/Results:

This is not a study which is required for registration. There are no wildlife specifications for an aerosol inhalation study, however, the toxicology inhalation procedures for rats can serve as a guide. Notably lacking in this present test, when compared with Toxicology's most recently proposed guidelines (4-14-1980), is information as to actual concentrations of toxicant in the chamber, as well as the particle size measurement needed for determining whether the aerosol is of respirable size for the test animals.

4. Conclusions:

- a. Category: Supplemental
- b. Rationale: There were no measurements made to determine toxicant concentrations (if any) available to the test animal in the inhalation chambers. Also, this is not a required study for registration.
- c. Repairability: None