

DATA EVALUATION RECORD

1. **CHEMICAL:** Pyrazon
Shaughnessey No. 069601
2. **TEST MATERIAL:** Pyrazon technical, 95% active ingredient
3. **STUDY TYPE:** Avian dietary - LC50
Species used: Bobwhite quail (Colinus virginianus)
4. **STUDY ID:** Munk, R. 1990. Avian dietary LC-50 test of Reg. No. 13 033 - 95% (pyrazon) in the bobwhite quail (Colinus virginianus) conducted by BASF Aktiengesellschaft, Ludwigshafen/Rhein, Federal Republic of Germany for BASF Corporation, Research Triangle Park, NC. EPA MIRD No. 416098-03.
5. **REVIEWED BY:**

Clyde R. Houseknecht
Wildlife Biologist
EEB/EFED

Signature: *Clyde Houseknecht*
Date: 11/6/90
6. **APPROVED BY:**

Henry T. Craven, Head
Review Section #4
EEB/EFED

Signature: *Henry T. Craven*
Date: 11/6/90
7. **CONCLUSIONS:** This study is scientifically sound and fullfills the guideline requirements. The LC50 of pyrazon to the bobwhite quail is >5000 ppm. Thus, pyrazon can be described as being practically nontoxic to bobwhite quail. There was no statistically significant reduction of feed consumption or body weight in any of the treatment groups as compared to the control group.
8. **RECOMMENDATIONS:** N/A

9. BACKGROUND: N/A
10. DISCUSSION OF INDIVIDUAL TESTS: N/A
11. MATERIALS AND METHODS:
 - A. Test Animals: The bobwhite quail used in this study were purchased from a commercial supplier in the Federal Republic of Germany. They were indistinguishable from wild birds. Chicks were 12 days old at the beginning of the study.
 - B. Test System: At arrival at the testing laboratory, chicks were held in stainless steel cages until allocation into test groups. Temperature was maintained using ceramic radiant heaters. The photoperiod was 12 hours light and 12 hours dark. Three days prior to the test chicks were randomly allocated to the test groups and were put into test cages. Stainless steel cages measuring 520 x 350 x 490 mm housed 10 birds each.

Food and water were provided ad lib throughout the maintenance period and the test. Food consumption was measured for two days prior to the administration of the test substance and each day of the test. Body weights were determined on days 0, 5, and 8.
 - C. Dosage: Nominal concentrations of test substance (mg/kg diet) were 0, 313, 625, 1250, 2500, and 5000. Mean measured concentrations were 0, 308, 610, 1253, 2471, and 5006, respectively.
 - D. Design: Avian Dietary LC50 Study.
 - E. Statistics: The statistical evaluation of body weight data was performed by one-way analysis of variance followed by Dunnett's test. No LC50 value was calculated because mortality only occurred at a level of 10% in the three highest treatment groups.
12. REPORTED RESULTS: The LC50 is greater than 5,000 mg/kg diet. The highest concentration causing no compound-related mortality was 610 mg/kg diet. There was no statistically significant difference in body weights or food consumption in the treatment groups when compared with controls.
13. STUDY AUTHOR'S CONCLUSION/QUALITY ASSURANCE MEASURES: This study does not meet the requirements for 40 CFR Part 160, Good Laboratory Practice Standards. This study was conducted in accordance with OECD Principles of Good Laboratory Practice (Paris, 1981).
14. REVIEWER'S DISCUSSION AND INTERPRETATION OF STUDY RESULTS:
 - A. Test Procedures: The procedures utilized in this study were in compliance with the EPA's Standard Evaluation

Procedure (SEP) for the Avian Dietary LC50 Test.

B. Statistical Analysis: No statistical analyses were necessary or performed. Observation of the mortality data shows that the LC50 exceeds 5,000 ppm and inspection of the means and standard deviations for food consumption and body weights demonstrate lack of statistical significance.

C. Discussion/Results: Observation of the data confirm the results reported by the author of the study.

D. Adequacy of the Study:

(1) Classification: Core

(2) Rationale: N/A

(3) Repairability: N/A

15. COMPLETION OF ONE-LINER: Yes, October 31, 1990

Shaughnessy No: 069001

Chemical Name PYRAZON

Chemical Class _____

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Study/Species/Lab/
Access #

Chemical
a.i

Results

Reviewer/
Date

Validation
Status

14-Day Single Dose Oral LD50

Species:

LD50 = mg/kg (95% C.L.)

Contr. Mort.(%) =

Lab.:

Slope = # Animals/Level =

Age(Days) =

Acc. #:

14-Day Dose Level mg/kg/(% Mortality)

Sex =

Comments:

14-Day Single Dose Oral LD50

Species:

LD50 = mg/kg (95% C.L.)

Contr. Mort.(%) =

Lab.:

Slope = # Animals/Level =

Age(Days) =

Acc. #:

14-Day Dose Level mg/kg/(% Mortality)

Sex =

Comments:

8-Day Dietary LC50

Species BOBWHITE QUAIL

LC50 >5000 ppm (95% C.L.)

Contr. Mort.(%) = 0

Lab.: BA5F

Slope = # Animals/Level = 10

Age(Days) = 12

Acc. # 416098-13

8-Day Dose Level ppm/(% Mortality)

Sex = ♂ + ♀

CRH

11/05/90

CORE

Comments:

LC50 = ppm (95% C.L.)

Contr. Mort.(%) =

Slope = # Animals/Level =

Age(Days) =

8-Day Dose Level ppm/(% Mortality)

Sex =

Comments:

6-hour LC50

Species:

LC50 = PP (95% C.L.)

Contr. Mort.(%) =

Lab.:

Slope = # Animals/Level =

Sol. Contr. Mort.(%) =

Acc. #:

96-Hour Dose Level pp/(% Mortality)

Temperature =

Comments:

96-hour LC50

Species:

LC50 = PP (95% C.L.)

Con. Mor.(%) =

Lab.:

Slope = # Animals/Level =

Sol. Con. Mort.(%) =

Acc. #:

96-Hour Dose Level pp/(% Mortality)

Temp. =

Comments:

96-hour Invertebrate

Species:

LC50 = PP (95% C.L.)

Con. Mort.(%) =

Lab.:

Slope = # Animals/Level =

Sol. Con. Mort.(%) =

Acc. #:

96-Hour Dose Level pp/(% Mortality)

Temp. =

Comments:

CONC.	NUMBER EXPOSED	NUMBER DEAD	PERCENT DEAD	BINOMIAL PROB. (PERCENT)
5006	10	1	10	1.074219
2471	10	1	10	1.074219
1253	10	1	10	1.074219
610	10	0	0	9.765625E-02
308	10	0	0	9.765625E-02

THE BINOMIAL TEST SHOWS THAT 0 AND +INFINITY CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS, BECAUSE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS GREATER THAN 95 PERCENT.

AN APPROXIMATE LC50 FOR THIS SET OF DATA IS 0

THE MOVING AVERAGE METHOD CANNOT BE USED WITH THIS DATA SET BECAUSE NO SPAN WHICH PRODUCES MOVING AVERAGE ANGLES THAT BRACKET 45 DEGREES ALSO USES TWO PERCENT DEAD BETWEEN 0 AND 100 PERCENT.

RESULTS CALCULATED USING THE PROBIT METHOD

ITERATIONS	G	H	GOODNESS OF FIT PROBABILITY
5	2.3326	1	.7536466

SLOPE = 1.01649
95 PERCENT CONFIDENCE LIMITS = -.53598 AND 2.56896

LC50 = 57766.35
95 PERCENT CONFIDENCE LIMITS = 6523.876 AND +INFINITY

LC10 = 3252.946
95 PERCENT CONFIDENCE LIMITS = 0 AND +INFINITY

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CONSIST OF REGISTRANT-SUBMITTED DATA.