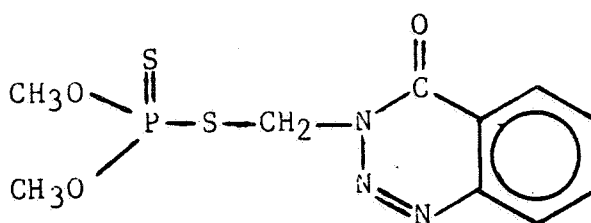


US EPA ARCHIVE DOCUMENT

ENVIRONM
PESTICIDE



Page 1

Common Name: **AZINPHOS METHYL** Date: 08/30/89
Chem. Name : O,O-DIMETHYL-S-[(4-OXO-1,2,3-BENZOTRIZAZIN-3(4H)-YL)-METHYL]
: PHOSPHORODITHIOATE
Shaugh. # : 58001 CAS Number: 86-50-0
Type Pest. : Insecticide/Acaricide (miticide)/Molluscicide
Formulation: 2-3%D,5-10%G,25-62.5%WP,1-2#/g&12.37%EC,2-3#/g FlC,12.4%Sc/L
Uses : FRUIT & FIELD CROPS/VEGETABLES/TOBACCO/ORNAMENTALS
: Tree Nurseries
:

Empir. Form: C₁₀H₁₂N₃O₃PS₂
Mol. Weight: 317.34
Solub.(ppm): 33 @ 25 C

VP (Torr): 2.2E-7
Log Kow :
Henry's :

Hydrolysis (161-1)

pH 5:[]
pH 7:[*] 23 HOURS AT 30 C
pH 9:[*] 2.2 HOURS AT 30 C
pH 4:[*] 39 HOURS AT 30 C
pH :[]
pH :[]

Photolysis (161-2, -3, -4)

Air :[]
Soil :[*] SaLm WITH 1.04%OM =9 DAYS
Water:[*] 76.7 HOURS AT pH 4.37
:[*] 9.4 HRS WITH UV (HG LAMP)
:[]
:[]

MOBILITY STUDIES (163-1)

Soil Partition (Kd)
1.[*] SaLm Kd = 7.6
2.[*] SiLm =16.75
3.[*] SiCl = 9.85
4.[]
5.[] Koc=900
6.[]

Rf Factors
1.[*] SaLm 0.22
2.[*] SiLm 0.18
3.[*] SiCl 0.24
4.[*] SiCL 0.14
5.[]
6.[]

METABOLISM STUDIES (162-1,2,3,4)

Aerobic Soil (162-1)

1.[*] SdLm WITH 1.4% OM = 44 DAYS
2.[]
3.[]
4.[]
5.[]
6.[]
7.[]

Anaerobic Soil (162-2)

1.[*] SaLm 68 DAYS
2.[]
3.[]
4.[]
5.[]
6.[]
7.[]

Aerobic Aquatic (162-4)

1.[]
2.[]
3.[]
4.[]

Anaerobic Aquatic (162-3)

1.[]
2.[]
3.[]
4.[]

[*] - Acceptable Study. [#] = Supplemental Study

Common Name: **AZINPHOS METHYL**

Date: 08/30/89

VOLATILITY STUDIES (163-2,3)

Laboratory:

Field:

DISSIPATION STUDIES (164-1,2,3,5)

Terrestrial Field (164-1)

1. [*] SaClLm <30d
2. [*] SaLm 30 DAYS (NO MOVEMENT OF RESIDUES BELOW 6" IN SOIL)
3. [*] SaLm 61 DAYS
4. []
5. [*] SaClLm 181 DAYS
6. [*] Sand 120 DAYS (NO MOVEMENT OF RESIDUES BELOW 6" IN SOIL)

Aquatic (164-2)

1. []
2. []
3. []
4. []
5. []
6. []

Forestry (164-3)

1. []
2. []

Other (164-5)

1. []
2. []

ACCUMULATION STUDIES (165-1,2,3,4,5)

Confined Rotational Crops (165-1)

1. []
2. []

Field Rotational Crops (165-2)

1. [#] NO RESIDUES DETECTED IN GRAIN, POD VEGETABLE, OR
2. [] LEAFY VEG. PLANTED 30 DAYS AFTER APPL OF 8 LBS AIA

Irrigated Crops (165-3)

1. []
2. []

Fish (165-4)

1. [#] 96 HR LC 50 FOR RAINBOW TROUT AND BLUEGILL ARE 3-6 PPB
2. [*] BCF FOR CATFISH AVG ABOUT 60 X; MAXIMUM OF 139 X

Non-Target Organisms (165-5)

1. [#] AT 2 PPM THERE IS NO EFFECT ON SOIL MICROORGANISMS
2. []

[*] - Acceptable Study. [#] = Supplemental Study

Common Name: **AZINPHOS METHYL**

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GROUND WATER STUDIES (158.75)

1. []
2. []
3. []

DEGRADATION PRODUCTS

1. BENZAZIMIDE
2. ANTHRANILIC ACID
3. HYDROXYMETHYL BENZAZIMIDE
4. METHYL BENZAZIMIDE
5. bis-(BENZAZIMIDE-N-METHYL) SULFIDE
- 6.
- 7.
- 8.
- 9.
- 10.

COMMENTS

DEGRADATION IS PRIMARILY BY AEROBIC MICROBES. AZINPHOS METHYL HAS NO EFFECT ON NITRIFYING OR DENITRIFYING ORGANISMS AT 20 PPM.

THERE ARE WIDELY CONFLICTING DATA FOR THE FIELD DISSIPATION STUDIES; SEVERAL STUDIES SHOW $T_{1/2} < 30$ DAYS (SANDY CLAY LOAM) WHILE ANOTHER SHOWED 181 DAYS FOR SANDY CLAY LOAM.

Koc = 900

ROOT CROPS SHOWED SIGNIFICANT RESIDUES OF PARENT AND AZINPHOS METHYL OXYGEN ANALOG AT 30 DAYS POST APPLICATION OF 1 LB AIA.

References: Sci.Chptr (4/11/86) HLM/Misc Reviews
Writer : S.C.Ternes J. HANNAN

[*] - Acceptable Study. [#] = Supplemental Study

Figure 1. Structure and nomenclature of azinphosmethyl (Guthion) and its metabolites.

