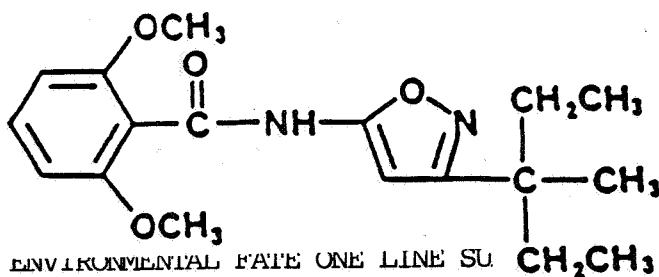


1/11/90



Common Name: **ISOXABEN** Date: 01/11/90
 Chem. Name: N-[3-(1-ETHYL-1-METHYLPROPYL)-5-ISOXAZOLYL]-2,6-DIMETHOXY-
 : BENZAMIDE CAS Number:
 Shaugh. # : 125851
 Type Pest. : HERBICIDE
 Formulation: 50% SUSP. CONC.(UK); 12.5% SUSP. CONC. (FRANCE)
 Uses : CONTROLS NUMEROUS BROADLEAF WEED SPECIES WHEN INCORPORATED
 : OR APPLIED TO THE SOIL SURFACE PREEMERGENCE TO WEEDS
 :

Empir. Form: C₁₈H₂₄N₂O₄ VP (Torr):
 Mol. Weight: 332.39 Log Kow : 2.64
 Solub.(ppm): 2 @ C Henry's :

Hydrolysis (161-1)	Photolysis (161-2, -3, -4)
pH 5: [*] STABLE	Air : []
pH 7: [*] STABLE	Soil : []
pH 9: [*] STABLE	Water: [#] 7-15 DAYS IN NATURAL SUN
pH : []	: []
pH : []	: []
pH : []	: []

MOBILITY STUDIES (163-1)

Soil Partition (Kd)					Rf Factors		
1. [*]	Sd	Si	Cl	%OM	pH	Kads	1. [*] SLIGHTLY MOBILE IN COLUMN
2. [*]	92	5	3	1.0	8.1	8.4	2. [] LEACHING OF 20" WATER OVER 10
3. [*]	62	23	15	1.2	7.2	10	3. [] DAYS. <0.31% OF APPLIED
4. [*]	38	41	21	1.9	6.1	16	4. [] RADIOACT. WAS FOUND IN LEACH-
5. [*]	30	37	33	3.1	6.4	30	5. [] ATE FROM COLUMNS TREATED WITH
6. []							6. [] UNAGED ISOXABEN.

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

Aerobic Soil (162-1)		Anaerobic Soil (162-2)	
1. [*]	4.3 MONTHS IN CLAY LOAM	1. []	
2. [*]	5.6 MONTHS IN LOAM	2. []	
3. [*]	10.6 MONTHS IN SANDY LOAM	3. []	
4. []		4. []	
5. []		5. []	
6. []		6. []	
7. []		7. []	

Aerobic Aquatic (162-4)		Anaerobic Aquatic (162-3)	
1. []		1. []	
2. []		2. []	
3. []		3. []	
4. []		4. []	

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

Common Name: ISOXABEN

Date: 01/11/90

VOLATILITY STUDIES (163-2,3)

Laboratory:

Field:

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

Terrestrial Field (164-1)

1. #] T_{1/2} = 30-40 DAYS IN SPRING-TREATED SAND SOIL IN FLORIDA
2.] SND LOAM SOIL IN INDIANA. PARENT WAS <.02 LB AIA IN SAMPLES
3.] FROM THE 6-12, 12-18, AND 18-24" DEPTHS AT ALL SITES. THE
4.] DEGRADATE 201469 WAS <.09 LB AIA IN THE 0-6" DEPTH AT ALL
5.] FOUR SITES AND <.01 LB AIA AT GREATER DEPTHS.
6.]

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.]
2.]

Irrigated Crops (165-3)

1.]
2.]

Fish (165-4)

1. *] BLUEGILL SUNFISH BCF: EDIBLE 14 X, NON-EDIBLE 134 X;
2.] WHOLE 70

Non-Target Organisms (165-5)

1.]
2.]

Common Name: **ISOXABEN**

Date: 01/11/90

GROUND WATER STUDIES (158.75)

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

DEGRADATION PRODUCTS

- 1. DEGRADATE 201469 IS SLIGHTLY MOBILE IN COLUMN STUDIES AND
- 2. APPEARS TO BE MORE MOBILE THAN THE PARENT.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

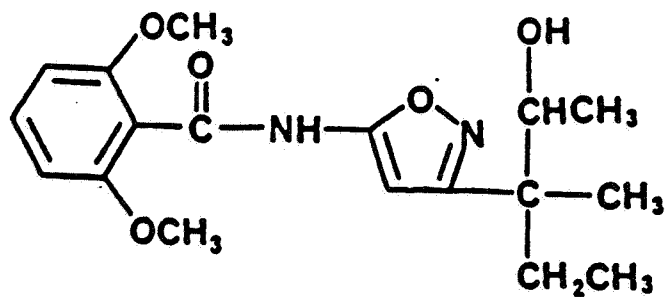
COMMENTS

IN FISH STUDY, THE RESIDUAL ISOXABEN WAS 52% IN EDIBLE TISSUES,
17% IN NON-EDIBLE TISSUES

ISOXABEN IS PERSISTENT BASED ON HYDROLYSIS, FIELD DISSIPATION,
AND AEROBIC SOIL METABOLISM; IT DOES NOT APPEAR TO BE MOBILE BASED
ON COLUMN LEACHING, LOW SOLUBILITY, AND LIMITED ADSORPTION/DESORPT-
ION DATA.

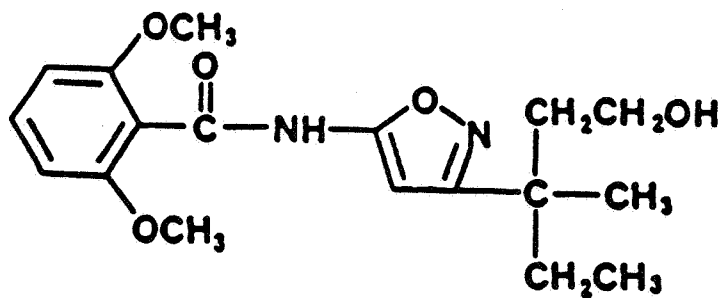
SOXABEN RESIDUES VOLATILIZED AT APPROX. .007 PPM/WK FROM LOAM SOIL
TREATED AT 1 PPM; VOLATILES TOTALLED 12-15% OF APPL. RADIOACTIVITY
DURINGA 36-WEEK PERIOD.

References: FARM CHEMICALS HANDBOOK; EPA REVIEWS
Writer : J. HANNAN



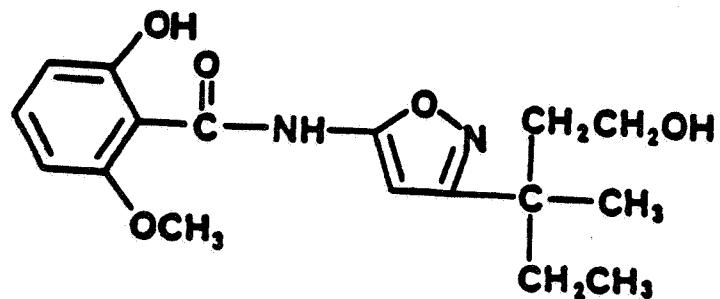
N-[3-(2-Hydroxy-3-methylpent-3-yl)
isoxazol-5-yl]-2,6-dimethoxybenzamide

(20H)

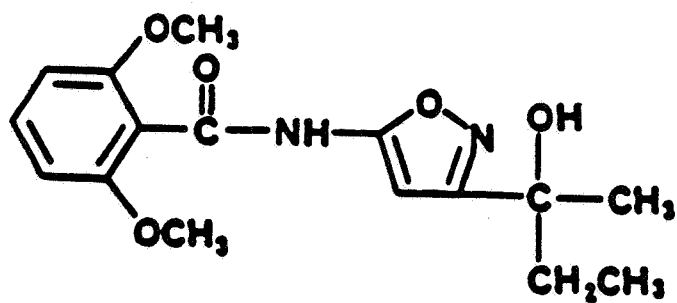


N-[3-(1-Hydroxy-3-methylpent-3-yl)
isoxazol-5-yl]-2,6-dimethoxybenzamide

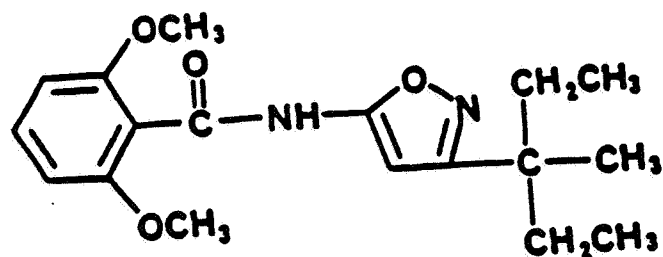
(30H)



**N-[3-(1-Hydroxy-3-methylpent-3-yl)
isoxazol-5-yl]-2-hydroxy-6-methoxybenzamide
(Metabolite C)**

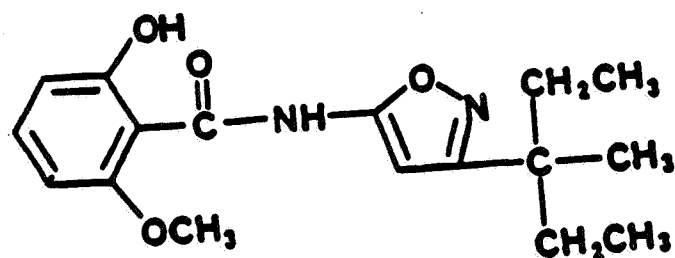


**N-[3-(2-Hydroxybut-2-yl)isoxazol-5-yl]-
2,6-dimethoxybenzamide
(201469)**



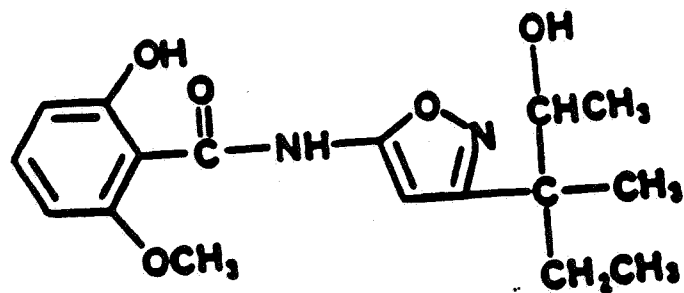
N-[3-(methylpent-3-yl)isoxazol-5-yl]-
2,6-dimethoxybenzamide

(Isoxaben, EL-107)



N-[3-(methylpent-3-yl)isoxazol-5-yl]-
2-hydroxy-6-methoxybenzamide

(Metabolite A)



N-[3-(2-Hydroxy-3-methylpent-3-yl)
isoxazol-5-yl]-2-hydroxy-6-methoxybenzamide

(Metabolite B)