

Addendum No. 1 to MRID # 421698-44

DER Study Title: Hardies, D, 1991. An aerobic soil metabolism study with S-23031, an experimental herbicide.

Guideline Number: 162-1

Reasons for changes:

- Upgrade of status from (Upgradable, Unacceptable) to Acceptable. Specify why
- Recalculation of  $t_{1/2}$  values. Specify why
- Recalculation of Koc values. Specify why
- Identification of degradates
- Others

Half-life was recalculated to include the degradate IMCA, or flumiclorac-acid, along with the parent, flumiclorac-pentyl, for use in the Drinking Water Assessment. Calculation was on the basis of applied radiation (%AR), and was done with SigmaPlot, using 2-parameter, single first-order (SFO/2) procedure. This study was for test compound labeled in the phenyl ring.

Results

Procedure	Half-life or DT50	3*half-life or DT90	Intercept	p-value, R <sup>2</sup>
Empirical	4 to 7 days	> 85 days	100.1 % AR	--
SFO/2	8.04 days	24.1 days	94.7 % AR	0.0005, 0.906

Revised by : \_\_\_\_\_

Date: \_\_\_\_\_

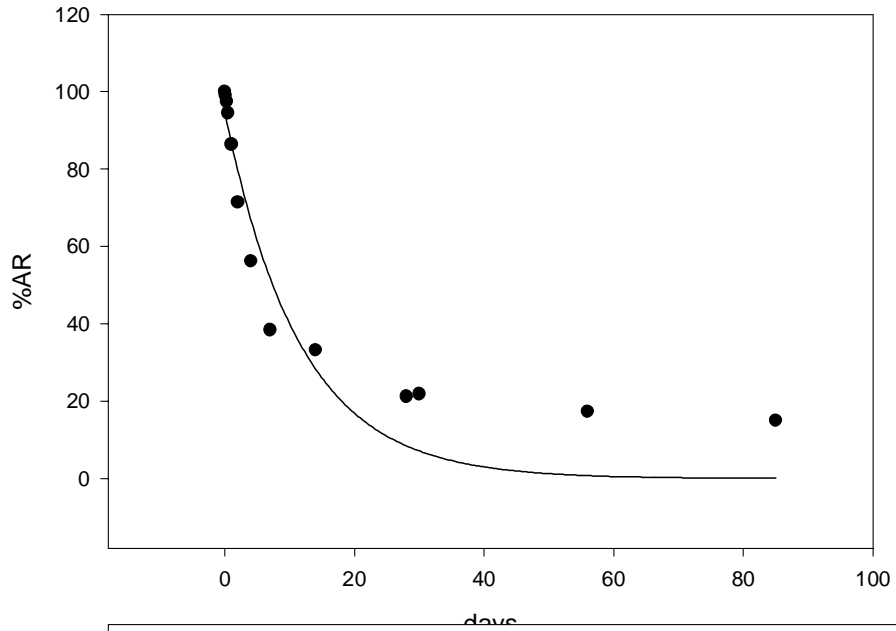
Secondary reviewed by: \_\_\_\_\_

Date: \_\_\_\_\_

MRID 42169844 aerobic soil metabolism of flumiclorac pentyl (S-23031)

day	parent	IMCA	sum
0	100.1	0	100.1
0.0833	74.8	24.2	99
0.25	66.2	31.3	97.5
0.5	45.5	49	94.5
1	33.4	53	86.4
2	20.1	51.4	71.5
4	18.8	37.4	56.2
7	17.8	20.6	38.4
14	17.2	16	33.2
28	12.1	9.1	21.2
30	14.1	7.8	21.9
56	13.7	3.7	17.4
85	13.2	1.8	15

parent + IMCA by SFO/2



— x column 2 vs y column 2  
● MRID 42169844 aerobic soil metabolism of flumiclorac pentyl (S-23031) vs Col 4

Nonlinear Regression

[Variables]

x = col(1)

y = col(4)

reciprocal\_y=1/abs(y)

reciprocal\_ysquare=1/y^2

'Automatic Initial Parameter Estimate Functions

xnear0(q)=max(abs(q))-abs(q)

yatxnear0(q,r)=xatymax(q,xnear0(r))

[Parameters]

a = yatxnear0(y,x) "Auto {{previous: 94.7265}}

b = -ln(.5)/(x50(x,y)-min(x)) "Auto {{previous: 0.0862027}}

[Equation]

f=a\*exp(-b\*x)

fit f to y

"fit f to y with weight reciprocal\_y

"fit f to y with weight reciprocal\_ysquare

[Constraints]

b>0

[Options]

tolerance=0.0001

stepsize=100

iterations=100

R = 0.95189399 Rsqr = 0.90610217 Adj Rsqr = 0.89756601

Standard Error of Estimate = 11.1222

	<b>Coefficient</b>	<b>Std. Error</b>	<b>t</b>	<b>P</b>
a	94.7265	5.0126	18.8976	<0.0001
b	0.0862	0.0179	4.8239	0.0005

Analysis of Variance:

	<b>DF</b>	<b>SS</b>	<b>MS</b>	<b>F</b>	<b>P</b>
Regression	1	13131.0041	13131.0041	106.1486	<0.0001
Residual	11	1360.7436	123.7040		
Total	12	14491.7477	1207.6456		

PRESS = 1769.2214

Durbin-Watson Statistic = 0.3666

Normality Test: Passed (P = 0.2200)

Constant Variance Test: Failed (P = 0.0018)

Power of performed test with alpha = 0.0500: 1.0000

Regression Diagnostics:

<b>Row</b>	<b>Predicted</b>	<b>Residual</b>	<b>Std. Res.</b>	<b>Stud. Res.</b>	<b>Stud. Del. Res.</b>
3	94.7265	5.3735	0.4831	0.5412	0.5230
4	94.0487	4.9513	0.4452	0.4962	0.4785
5	92.7069	4.7931	0.4309	0.4760	0.4586

6	90.7304	3.7696	0.3389	0.3703	0.3552
7	86.9029	-0.5029	-0.0452	-0.0486	-0.0464
8	79.7254	-8.2254	-0.7395	-0.7876	-0.7731
9	67.0999	-10.8999	-0.9800	-1.0683	-1.0760
10	51.8096	-13.4096	-1.2057	-1.4059	-1.4801
11	28.3366	4.8634	0.4373	0.5386	0.5204
12	8.4767	12.7233	1.1440	1.2265	1.2587
13	7.1343	14.7657	1.3276	1.4043	1.4780
14	0.7585	16.6415	1.4962	1.4994	1.6028
15	0.0623	14.9377	1.3431	1.3431	1.4006

Influence Diagnostics:

Row	Cook'sDist	Leverage	DFFITS
3	0.0373	0.2031	0.2641
4	0.0298	0.1951	0.2356
5	0.0250	0.1805	0.2152
6	0.0133	0.1621	0.1563
7	0.0002	0.1362	-0.0184
8	0.0416	0.1183	-0.2831
9	0.1075	0.1585	-0.4670
10	0.3556	0.2646	-0.8878
11	0.0750	0.3408	0.3742
12	0.1125	0.1301	0.4868
13	0.1172	0.1063	0.5096
14	0.0048	0.0043	0.1050
15	0.0001	0.0001	0.0114

95% Confidence:

Row	Predicted	Regr. 5%	Regr. 95%	Pop. 5%	Pop. 95%
3	94.7265	83.6938	105.7592	67.8754	121.5777
4	94.0487	83.2363	104.8612	67.2874	120.8101
5	92.7069	82.3065	103.1073	66.1093	119.3045
6	90.7304	80.8745	100.5863	64.3410	117.1198
7	86.9029	77.8674	95.9383	60.8088	112.9970
8	79.7254	71.3063	88.1445	53.8383	105.6126
9	67.0999	57.3537	76.8462	40.7512	93.4486
10	51.8096	39.2172	64.4020	24.2808	79.3383
11	28.3366	14.0452	42.6281	-0.0096	56.6829
12	8.4767	-0.3542	17.3075	-17.5473	34.5007
13	7.1343	-0.8458	15.1144	-18.6134	32.8820
14	0.7585	-0.8411	2.3582	-23.7735	25.2906
15	0.0623	-0.1366	0.2611	-24.4184	24.5429