



NON-GLP STUDY REPORT

Date: December 2020

Sponsor: Sprinkler Magician
Study: Direct Spray 20
Test Method: 311

RESULTS:

The results of this study are shown in Tables 1-3, which illustrates the percent mortality and Abbott's corrected percent mortality for each trial.

$$\text{Percent Mortality} = \text{Number Dead} / \text{Total Population} \times 100$$
$$\text{Abbott's Percent Mortality} = (1 - (1 - \text{Treatment Mortality}) / (1 - \text{Control Mortality}))$$

The SM2020-1 formulation (6oz/gal) recorded 100% mortality when applied to the yellow fever mosquitoes, red imported fire ants, and cat fleas.

STATISTICAL ANALYSIS:

Tables 4-6 show the results of a Student's t test (p value = 0.05), which was used to analyze the number of dead individuals per replicate for each population. A statistical difference (p ≤ 0.05) was recorded between the number of dead individuals in the untreated controls compared to the number of dead that were treated with the SM2020-1 formulation (6oz/gal) during all species trials.

TABLES:

Table 1. Yellow Fever Mosquitoes (AEDSAE)

Percent Mortality					
Test Substance:	Pre-trt	1 hr	2 hr	4 hr	24 hr
Control - Untreated	0%	0%	0%	0%	0%
Code: SM2020-1 (6mL/122mL water)	0%	75%	78%	90%	100%
Abbott's Percent Mortality (1925.)					
Code: SM2020-1 (6mL/122mL water)	0%	75%	78%	90%	100%

Table 2. Red Imported Fire Ants (SOLEIN)

Percent Mortality											
Test Substance:	Pre-trt	1 hr	2 hr	4 hr	24 hr	2 DAT	3 DAT	4 DAT	5 DAT	6 DAT	7 DAT
Control - Untreated	0%	0%	0%	0%	0%	0%	0%	0%	5%	8%	8%
Code: SM2020-1 (6mL/122mL water)	0%	40%	55%	50%	90%	95%	95%	95%	95%	95%	100%
Abbott's Percent Mortality (1925.)											
Code: SM2020-1 (6mL/122mL water)	0%	40%	55%	50%	90%	95%	95%	95%	95%	95%	100%

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Table 3. Cat Fleas (CTECFE)

Percent Mortality									
Test Substance:	Pre-trt	1 hr	2 hr	4 hr	24 hr	2 DAT	3 DAT	4 DAT	5 DAT
Control - Untreated	0%	0%	0%	0%	3%	10%	10%	25%	40%
Code: SM2020-1 (6mL/122mL water)	0%	0%	0%	0%	3%	35%	60%	88%	100%
Abbott's Percent Mortality (1925.)									
Code: SM2020-1 (6mL/122mL water)	0%	0%	0%	0%	0%	28%	56%	83%	100%