

Research Notes

Passport Food Safety Solutions



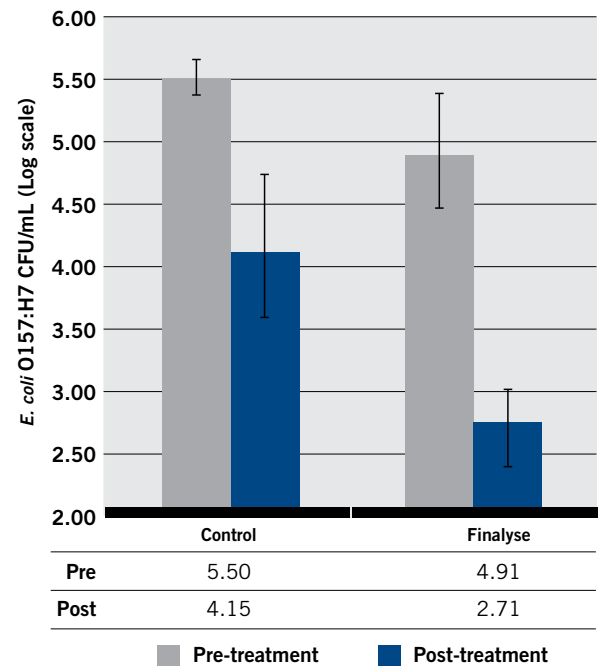
Finalyse decreased *E. coli* on live cattle hides in 45 minutes.

STUDY OVERVIEW¹

Using the spray system found in commercial beef-processing facilities, a study was performed to determine the efficacy of Finalyse™ on the hides of live cattle.

- 50 heifers weighing approximately 1,000 lbs. were used in the study
 - 10/day, 5/treatment group
- The left and right side of the rump (1,000 cm²) of live cattle were inoculated with *E. coli* O157:H7
- Study conducted over a 5-day period
 - Day 1 was excluded due to the low numbers of bacteria recovered on the control animals
- Samples taken 45 minutes post-inoculation to establish pre-treatment levels of *E. coli* O157:H7
- Cattle were treated using the Finalyse Application System™
 - Control water wash
 - Finalyse solution
- Samples were taken 45 minutes post-treatment

FIGURE 1: *E. coli* O157:H7 prevalence of Finalyse vs. untreated control



RESULTS

- Cattle treated with Finalyse exhibited a statistically significant decrease ($P < 0.01$) in *E. coli* O157:H7 compared to controls at 45 minutes post-treatment
- Finalyse caused, on average, a 0.85_{Log} CFU/mL mean reduction in *E. coli* O157:H7 when directly comparing post-treatment values
- Statistical analysis using pre-treatment Log values as a covariate found the post-treatment least square mean value decreased 1.03_{Logs} compared to the control

TABLE 1 Statistical results

	Post-treatment least square means, adjusted for pre-treatment values		P-value	
	Control	Finalyse	Baseline	Treatment
Pooled days 2-5	3.99	2.96	<0.01	<0.01

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¹ Data on file, 2011.