

October 1, 2010

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Reference: shoo!TAG Field Test Study
Wednesday August 18th, 2010
Wimberley, Texas

Subject: Independent Observer Report of shoo!TAG Field Test Study

Mr. McCrary,

The shoo!TAG Field Test Study conducted in Wimberley, Texas on the 18th of August was intended to determine the “pragmatic” efficacy of shoo!TAG by analyzing the mosquito / shoo!TAG interaction. Specifically, the objective was to prove shoo!TAG’s ability to repel mosquitoes from humans in a controlled outdoor environment. My role as an Independent Observer was to:

1. Provide an independent analysis of the Field Test Conformance to the Protocol
2. Oversee the Field Test Study to ensure it remained unbiased such that independent results are obtained
3. Provide an Independent Initial Evaluation of shoo!TAG efficacy with Results and Conclusions from Field Study
4. Conclusions and Recommendations

1. Independent Analysis - Field Test Conformance to the Protocol; *“Study of shoo!TAG, a chemical free, frequency barrier that repels mosquitoes away from people”* (Please see Attachment I: “Study Protocol”) [NOTE: Observed deviations from the Protocol will be **BOLDED**.]

Claim:

Under the stated indications for use and when worn properly, the shoo!TAG product significantly reduces the number of mosquito bites to humans without the use of any other mosquito bite repellent.

Specific Objectives: Determine if there is a reduction in mosquito bites when the shoo!TAG is used properly as compared to no mosquito repellent at all.

Comparative Variables:

The Study consisted of: (Please see Attachment 1 – “Study Protocol” for details.)

1. Two Control Groups comprised of 3 participants per Control Group, two men and 1 woman. Each participant was instructed not to drink alcohol within 36 hours, did not wear perfume or lotions of any type, and was supplied similar meals during the day of the study.

2. **Mosquito Proof Suit Validation - One female was independently outfitted with a Coghlan mesh mosquito proof suit to validate that the suit was functional and provided 100% protection to the parts of the body covered by the suit from mosquito bites.**
3. Only the arms were exposed from the elbow to the hand by the participants for mosquito bite events. Protection for the body was provided by wearing the Coghlan Suit.

Materials:

- 2 screened tents - Timber Creek Canopy Tent 10' x 10' x 82" – no sealed floor – sides were staked to the ground, four stakes per side. Grass was cut to approximately 3" height.
- 3 shoo!TAGs were worn 36 hours prior to test for one control group
- 7 Coghlan's Bug Jackets
- 7 Coghlan's Bug Pants
- 2 clocks
- 2000 mosquitoes (separated at larvae stage as to supply exactly 1000 mosquitoes per screened tent)

Other Participants:

- Camera crew
- Narrator/Investigator
- Independent Observer

Participant Inclusion:

The study included a total number of 7 human participants - 2 men and 1 women participating in three Control Groups. **An additional female was asked to participate in the study as a control – she was completely enclosed in a Coghlan mesh suit to validate that no mosquito bite events could occur to other parts of the body that could be missed in the counting of mosquito bite events.**

In order that weather and other exterior conditions are equal for each group, the study took place at a site which enabled each tent to be approximately 50 feet apart, with no obstructions surrounding or between them.

Participant Exclusion:

The participants were screened as to not have excessive hair on their arms. The participants were healthy with no recent surgeries or ailments.

Participant Description:

CONTROL GROUP 1: Participants shall each wear one shoo!TAG product on a nylon string around their necks 36 hours prior to test. The Field Test duration was 10 minutes.

CONTROL GROUP 2: Shall not wear either shoo!TAGs or any repellents. The Field Test duration was 10 minutes.

CONTROL GROUP 3: Participants from Control Group 1 were asked to remove shoo!TAGs and return to the tent. The Field test duration was for a 5 minute interval.

Process: At approximately 7:00PM the participants in Control Group 1 and Control Group 2 entered the tents where they remained for 10-minutes.

At the conclusion of ten minutes, Group 1 and Group 2 participants exited the tents and waited approximately five minutes for any bites to fully and visibly develop. All bites were circled with a marker, counted and recorded.

2. Oversee the Field Test Study to ensure it remained unbiased such that independent results are obtained

In general, the protocol was maintained as well as anticipated; only minor deviations from the detailed protocol were required due to the last minute cancelation of one of the study participants. The only major deviation from the provided protocol was **the addition of a third Control Group** (identified as Control Group 3 above) to provide additional data to support the efficacy of the shoo!TAG on each individual participant. Also, during the time interval between exiting from Control Group 1 and entering the tent as Control Group 3, participants were asked to use their cellular phones to attempt to dissipate any remaining frequency based interferences remaining from the time when they were wearing the shoo!Tag.

It should be noted that **Control Group 3** (formerly Control Group 1) was not wearing the shoo!TAG, having removed it as described above, and was only exposed to potential mosquito bite event for 5 minutes – not the 10 minute duration for the earlier Field Studies.

As the Independent Observer, I observed and validated the count of each bite event.

3. Provide an Independent Initial Evaluation of shoo!TAG efficacy - Results and Conclusions from Field Study:

At the conclusion of each timed phase of the Field Test Study, participants were requested to leave the tent. Attached mosquitoes were removed from the participants and bites were identified and counted. Count totals are presented in Table 1 together with Mean and Standard Deviation calculations. Table 2 shows Bite counts for Control Group 3 based on an adjustment factor used to account for the time difference, 5 minutes vs. 10 minutes. The actual number of Bites was adjusted from 5 minutes to 10 minutes to make the data comparable to the data from Control Group's 1 & 2. The adjustment consisted of multiplying the actual number of Bites by the ratio of the time difference, $10 \text{ minutes} / 5 \text{ Minutes} = 2x$. **No adjustment was made** for the mosquitoes which escaped during the transition from Control Group 1 to Control Group 3 participation or for mosquitoes which had already bitten the participants during Group 1 tests. Thus the 2x correction factor is intended to be a very conservative correction factor.

Based upon the resulting numbers, it seems clear that some affect is occurring to reduce the number of mosquito bites based upon the correct application of the shoo!TAG. These results appear to be positive, however it must be noted that the size of the study conducted was insufficient to evaluate the statistical significance of the results.

Apart from mosquito bite count totals, I believe some relevant information can be obtained from participant comments and personal observations. The following comments were noted from study participants:

Participant: "During the trials it seems that the mosquitoes were less aggressive in the test with shoo!Tags present." –

Participant: "It seemed that the mosquitoes landed on the study participants without realizing that the surface upon which they landed was a viable food source. Once present on the subject for a significant amount of time, the mosquito commenced feeding."

Personal Observation: I observed that participants in Control Groups 2 and 3 were both bitten immediately upon mosquito landing.

Personal Observation: Once the participants left the tents, mosquitoes that had either escaped through the tent opening or were physically attached to the study participants aggressively attacked all of the study contributors and observers with a complete lack of interest in study participants still wearing the shoo!TAG. Leading to a possible conclusion that the shoo!TAG caused the mosquitoes to preferentially feed on unprotected or less protected individuals in the area before biting shoo!TAG wearers.

Table1 – Total Bite Count by Participant

Participant	Control Group	Bites (Unadjusted)	Mean	Standard Deviation
Stacie	1	30		
Jabeson	1	0	18	15.87
Will	1	24		
Herbert	2	60		
Ron	2	98	70	24.21
Abbie	2	53		
Stacie	3	47		
Jabeson	3	26	32	12.74
Will	3	24		
Annie	Control	0	0	

Table 2 – Bite Count for Control Group 3 - Adjusted

Participant	Control Group	Bites	2 to 1 Correction	Average	Standard Deviation
Stacie	3	47	94		
Jabeson	3	26	52	64.67	25.48
Will	3	24	48		

Table 2: Mosquito Bite Count for Control Group 3 – Adjusted for the Study Time difference. The actual number of Bites was adjusted from 5 minutes to 10 minutes to make the data comparable to the data from Control Group’s 1 & 2. The adjustment consisted of multiplying the actual number of Bites by the ratio of the time difference, $10 \text{ minutes} / 5 \text{ Minutes} = 2x$. No adjustment was made for the reduction of escaped mosquitoes or the number of mosquitoes that had already fed.

4. Conclusions and Recommendations

Conclusions

1. The Field Test Study Satisfactorily Conformed to the Protocol
2. The Field Test Study was conducted unbiased and independent results are obtained
3. Although this test was very promising, the scale of the test was insufficient to establish the efficacy of shoo!TAG performance to be supported by statistical data analysis. However, something is seems to be occurring to reduce the number of Mosquito Bites effecting the subjects protected by shoo!TAG.

Recommendations:

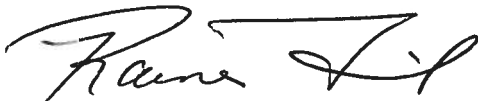
1. A follow-on study should be conducted to compare efficacy to existing commercially available Mosquito Repellant products. Highly concentrated DEET products should be included in this study.
2. It is strongly recommended that a much smaller mosquito population be used in each study to avoid the chance encounter with study participants. The mosquito concentration of 1,000 in 683 ft³ when occupied by 3 people is much too high and not representative of normal qosquito densities in nature.
3. The next series of studies should be conducted by, or under the direction of, a recognized, highly qualified mosquito principal investigator. This will be the best way to assure that you have an unbiased study to validate your claims and prove the efficacy of shoo!TAG.

Attestation:

My role in this Field Test Study was as an Independent Observer. I have no financial interest and have not been promised any financial interest in Energetic Solutions, LLC or in the product shoo!TAG. I received no payment or incentive for my participation. My motivation was purely scientific.

Thank you for inviting me to participate in the evaluation of this very interesting and innovative product. If you have any additional comments, please feel free to contact me.

Sincerely,



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Attachment: Protocol