



UNIVERSIDAD DE GUAYAQUIL

DEPARTMENT OF CHEMICAL SCIENCES

Ciudadela Universitaria "Dr. Salvador Allende"

Telephone: 2293680, E-mail: fcquimic@ug.edu.ec

Guayaquil, Ecuador

FINAL REPORT

CODE: 38/05

TITLE:

Determination of the possible weight loss effect of the product known as **Vermella Slim**, originating from NutraMedix Laboratories, LLC, Florida, United States, and **Hoodia Supreme**, originating from Natures Benefit/Syndrome X Inc., New Jersey, United States.

OBJECTIVES:

To study the effectiveness of **Vermella Slim** and **Hoodia Supreme** in producing effects on weight gain in laboratory mice, following techniques described in the literature.

BACKGROUND:

The present study has as background the possible weight loss effect of **Vermella Slim** and **Hoodia Supreme** using weight gain in laboratory mice as an indicator of effectiveness.

As discussed in numerous international works, the pharmacological study of the above-mentioned effect is indispensable, and guarantees (within the margin of error associated with the technique) that the potential for producing weight loss effects in humans will be learned.

The basis of this work is the pharmacological effect as a weight loss product, as described in international literature (1, 2).

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TECHNICAL, SCIENTIFIC AND SOCIOECONOMIC BENEFITS:

Demonstrating that these products possess weight loss effects is important since the product could be added as a new medication, in this case a plant-based medicine with the associated low toxicity, which would further allow us to add it to the Registry of new medicines.

VARIABLES TO MEASURE:

1. Daily administration of Vermella Slim and its effect over body weight for 7 days.
2. Daily administration of Hoodia Supreme and its effect over body weight for 7 days.

PROCEDURES TO FOLLOW:

TEST MATERIALS: Vermella Slim and Hoodia Supreme, the procedure followed was that described by Gerhard Voegel (1997).

CHANGES IN THE CURRICULUM:

Changes did not take place in protocol proposed to the Unity of Quality Guarantee, whose number is referred to on Page 1.

DATA FROM THE SAMPLE:

Organization soliciting services: NutraMedix Laboratories, LLC and Natures Benefit/Syndrome X Inc.

Person in charge of the Organization's application: Jose Icaza

Date of application: 5/26/05

Organization that carried out the work: University of Guayaquil, Department of Chemical Sciences.

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Address: Ciudadela Universitaria "Dr. Salvador Allende"

Storage: The product was maintained at room temperature before and during the experiment, and as indicated was protected from light and kept in a locked cabinet.

INFORMATION WITH RESPECT TO THE HANDLING:

No special handling instructions were needed.

COMPOSITION OF THE PRODUCT:

Vermella Slim:

Vermella leaf extract

Mineral water

Ethanol (20 – 25%)

Hoodia Supreme

Hoodia Supreme Powder

Cellulose

Magnesium Stearate

Silica

EXPERIMENTAL PROCEDURE:

INTRODUCTION:

This experiment was carried out with the intention of determining the possible weight loss effect of **Vermella Slim** and **Hoodia Supreme**, utilizing oral administration, given that this is the proposed method for administration to humans.

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DOSAGE USED IN THE TEST:

Vermella Slim: In this study 0.5 ml/200 g of animal body weight was utilized, in a daily administration. The product was dissolved in water at a rate of 40 drops per 80 ml of water.

Hoodia Supreme: 2 ml/200 g of animal body weight was utilized, which is equivalent to 100mg/200g. The product was dissolved in water at a rate of 1 ml per 80 ml of water.

PRINCIPAL TEST:

METHODS AND TECHNIQUES:

Study Material: Vermella Slim and Hoodia Supreme

Animal Model: A single rodent species (mouse) was utilized, with a minimum of 5 animals of a single sex in each group. In this case, male mice with an average weight within $\pm 20\%$ (3), belonging to the Wister line and coming from the Chemistry Department of the University of Guayaquil were appropriate and were utilized in the experiment.

The animals were maintained in quarantine conditions and were acclimated according to established procedures (4, 5), said period having a duration of five days minimum.

Access to the water was "ad libitum", but food was given in a controlled form, a quantity measured by noting what was consumed and what was left the next day. (6, 7)

The animals were randomly distributed from within the different groups. (8)

Food was denied 4 hours before exposure to the test material.

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The experiment lasted 12 days (5 of acclimation and 7 of test)

Each mouse was given the stipulated quantity of food appropriate for the species.

At the end of the experiment all the animals were euthanized, following the procedures of Refinement, to avoid pain and suffering by the animals.

STATISTICAL PROCESS:

The mean animal weight and standard deviation of each day were determined, and at the end of the experiment a one-tailed Analysis of Variance and the Student Newman Keuls test with $p < 0.05$ was conducted to see if the groups differed significantly.

METHOD DEVELOPMENT:

The following two groups were constructed for the test:

TESTING GROUPS	
1	Animals that received Hoodia Supreme 100 mg/200 g in a volume of 2 ml/200g via oral intake and dissolved in 80 ml of water.
2	Animals who received Vermella Slim in a volume of .5 ml/200g via oral intake and with 40 drops dissolved in 80 ml of water.

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RESULTS AND DISCUSSION:

In the following table one finds the fluctuations in the animal's weights from the first to the last day of the test.

TABLE # 1. CHANGE IN BODY WEIGHT OF MICE WHO INGESTED VERMELLA SLIM AND HOODIA SUPREME IN DRINKING WATER AND BY INTRAGASTRIC CANULA								
Groups		Days						
		1	2	3	4	5	6	7
Hoodia Supreme	\bar{X}	166.8	166.6	168.6	168.6	166.2	165.2	167.0
•	s.d.	17.61	18.11	17.52	16.82	11.6	12.6	11.78
V.Slim	\bar{X}	167.8	169.8	169.8	171.4	170.6	164.2	169.8
	s.d.	17.36	16.05	14.6	13.7	14.9	14.5	13.53

One can see from the table that during the week of the experiment both groups had similar results, with no statistically significant differences between groups and between days ($p < 0.05$).

The results within the groups between the first and seventh day of the experiment were similar.

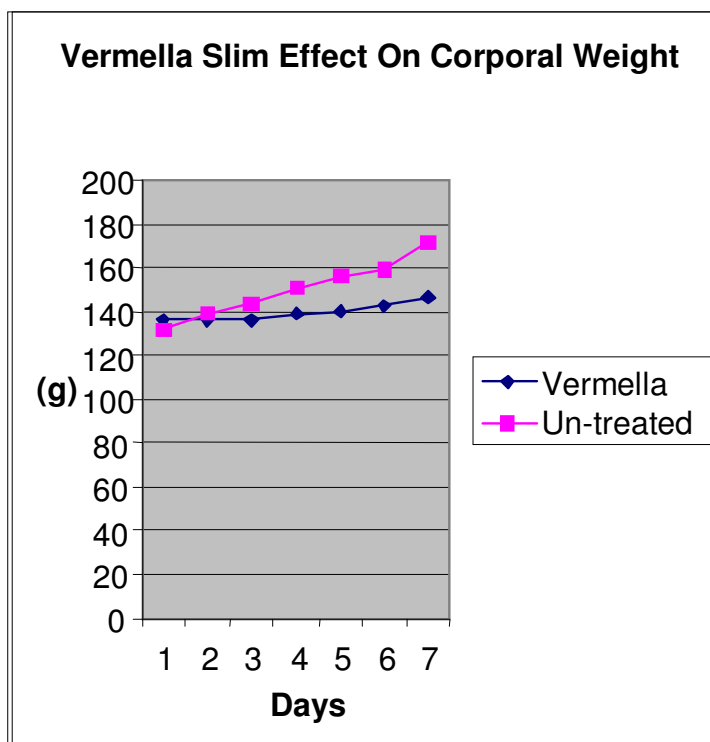
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The following figure was created from the numbers from Table #1.



In this figure one can see with more clarity that, although there is no statistically significant difference between the two, Hoodia Supreme brings weight down more than Vermella Slim, although the difference is slight.

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One must take into consideration that the animals that received Vermella Slim received four times less product than those that received Hoodia Supreme.

In a former study utilizing Vermella Slim, in which it was contrasted with a control group that received no treatment, the results were the following:

TABLA # 2. CHANGE IN BODY WEIGHT OF MICE WHO INGESTED VERMELLA SLIM IN DRINKING WATER AND BY INTRAGASTRIC CANULA.								
Group		Days						
		1	2	3	4	5	6	7
Control	X	131.8 a	139.4 ab	144.0 bc	151.2 c	156.2 C	159.4 c	171.6 d
•	s.d.	8.17	4.67	4.30	4.21	4.0	4.9	7.16
V.Slim	X	136.4 a	136.0 a	136.6 a	139.4 a	140 a	142.6 a	146.6 a
	d.s	7.37	8.66	8.96	7.4	7.81	7.47	5.06

As can be seen from the table, weight gain for the mice that received Vermella Slim was less than the Control Group. However it was greater than that which occurred in this new, present experiment.

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This can be explained by the fact that the mice in the first experiment were younger than those in the present experiment, weighing approximately 130 grams. Since they were in the process of developing, their growth curve was greater than those that have a weight of 160 grams. Thus, as explained previously, we can see in both experiments that Vermella Slim is as capable of reducing weight gain in mice as Hoodia Supreme.

CONCLUSIONS:

Vermella Slim and Hoodia Supreme have a similar effect assisting in weight loss in laboratory mice used as the experimental animal, in a study that lasted seven days.

PERSONNEL RESPONSIBLE FOR THE STUDY:

Responsible Professional:

MSc. Gastón García Simón

Date: 06/06/05

Signature:



BIBLIOGRAPHY:

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