

Proprietary Wellness, LLC  
March 23<sup>th</sup>, 2009

Dr. Susan Walker, Ph.D.  
Division of Dietary Supplement Programs  
Office of Nutritional Products, Labeling and Dietary Supplements  
Center for Food Safety and Applied Nutrition  
Food and Drug Administration  
200 C Street, S.W. (HFS-450)  
Washington, DC 20204

Dear Dr. Walker,

Pursuant to Section 8 of the Dietary Supplement Health and Education Act of 1994, Proprietary Wellness, LLC, Silver Springs, Nevada on behalf of its licensees, wishes to notify the Food and Drug Administration that it will market a new dietary ingredient, 1-dehydroepiandrosterone, a dietary ingredient on the market prior to October 15, 1994. Accordingly, enclosed please find two (2) copies of this notification.

The dietary supplement that contains 1-dehydroepiandrosterone will consist of twenty five (25) milligrams of 1-dehydroepiandrosterone in a tablet or capsule that will be suggested to be taken up to three times per day.

Attached please find a summary and references which establish that this dietary ingredient, when used under the conditions suggested in the labeling of the dietary supplement, is reasonably expected to be safe.

### ***Section 1***

- a) Proprietary Wellness  
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2840 Highway 95  
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Silver Springs, Nevada 89429
- b) Carolyn Morrison – Resident Agent

### ***Section 2***

- a) The name of the dietary ingredient is 1-dehydroepiandrosterone.

### ***Section 3***

- a) The dietary supplement that contains 1-dehydroepiandrosterone will consist of twenty five (25) milligrams of 1-dehydroepiandrosterone in a tablet or capsule that will be suggested to be taken up to three times per day.
- b) The label will contain the following instructions for use: “DIRECTIONS FOR USE: This product is for male adults over the age of 21 only. Do not exceed recommended dosage. This product is not intended to diagnose, treat, cure, or prevent any disease.”  
KEEP OUT OF REACH OF CHILDREN – NOT SUITABLE FOR PREGNANT OR LACTATING WOMEN.

### ***Section 4***

#### **4.1 *Background:***

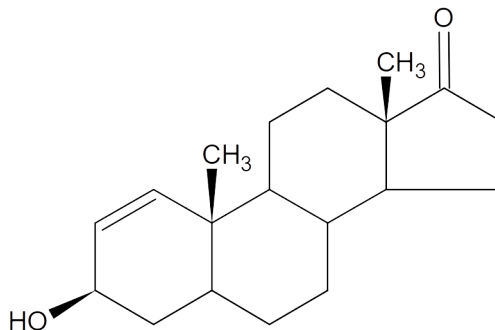
1-Dehydroepiandrosterone is present in the food supply as food in bovine tissue, via the natural conversion process of 1-Androstenediol which was found endogenously in pork tissue (1) and also as a metabolite of human metabolism(9). 1-androstenediol has been shown in the literature to naturally occur in Pig adipose tissue and was widely accepted to be a dietary substance (1). Additionally, 1-DHEA is a natural metabolite of 1,4 Androstadiene-3,17-dione via the 5aReductase enzyme. 1,4 Androstadiene-3,17-dione has been proven in countless papers to appear naturally in bovine tissue and has been on the US market since 2001 as a dietary supplement. Several papers have confirmed the endogenous production of boldenone and boldione in mammals with numerous theories of how the animal creates this hormone (2,3) 17a-Boldenone was found in untreated animals further confirming the presence of endogenous 1,4 androstadienes (3). This is consistent with the findings of Velle, that ruminants excrete most of their steroidal agents into the feces and in the 17a configuration(4). 17-epimerization of 17-beta hydroxy steroids to 17-alpha hydroxysteroids steroids is an accepted path of steroid metabolism. This all supports the conclusion that cattle and pigs can produce androstadiene steroids from a variety of sources (5). Via 5aReductase, and 3b-Hydroxysteroid dehydrogenase, both plentiful in the bodies of pigs and cattle, 1,4 Androstadiene-3,17-dione can be

converted to 1-DHEA in the body of both the bovine and pig. The human body has also been shown to produce 1-ene hormones from exogenous sources such as DHEA supplementation(6). As shown, exogenous hormone administration can yield 1-ENE metabolites (7) which further supports the position that 1-ene hormones are byproducts of mammalian metabolism of which 1-DHEA is included.

According to DSHEA, a metabolite of a dietary ingredient is therefore allowed under DHSEA regulations and tissue concentrations and extracts are and have been used for thousands of years to promote health and vitality along with extractions of food born supplements. 1-ene hormones have been shown to occur in humans, pigs and other species and 1-DHEA is a natural metabolite of those hormones(1,7,8,9,10,11,12). Specifically 1-DHEA is a metabolite of 5alpha-androst-1-ene-3beta,17beta-diol by virtue of the action of 17-beta hydroxysteroid dehydrogenase which has been shown to be present in pigs (13,14) and also a metabolite of 1,4 Androstadiene-3,17-dione via 5aReductase and 3a/b hydroxysteroid dehydrogenase. This product is not intended to treat or cure any disease, but it can be used to augment hormone levels in men wishing to increase their levels. Both beef and pig flesh are articles that are sold as food and are in the food supply. Recently their hormone levels have been shown to influence excretion ratios of natural hormones in humans(6) showing potential activity as a nutritional supplement.

The CAS number for this compound is not available.

#### 4.1.1 *Structure:*



#### 4.2 *Name of Ingredient:*

Androst-1-ene-3-ol-17-trione (1-dehydroepiandrosterone)

#### 4.2.1 *Manufacturing Process:*

Products will be manufactured in a variety of cGMP certified facilities.

#### 4.2.2 *Product Specifications:*

a) Dry white powder, >95% purity.

\* Proprietary Wellness LLC is not: a raw material manufacturer, copacker, nor commercial brand. It is expected that each manufacturer will provide their own specifications.

\* Proprietary Wellness LLC expects the ingredient to be manufactured at greater than 98% purity to be covered under this NDI, thus making the ingredient "pure" by manufacturing standards."

b) HPLC, FTIR, GCMS

4.3.1 *Safety of Ingredient:*

Using 5-DHEA as a model, we expect the exogenous use of 1-DHEA to be extremely safe, since 1-DHEA would have many improvements in safety over standard 5-DHEA which can be found at thousands of nutrition stores across the country. 5-DHEA has a long history of use in healthy and diseased humans and has been shown to be safe in doses up to 200 mg per day for 24 weeks (15) and 2250 mg for 16 weeks (16) with minimal side effects. The side effects that are encountered are due, in large part to the formation of estrogen and potent 5-alpha reduced metabolites (17,15). DHEA has been shown in the literature to convert via the aromatase enzyme to estrogens (18). The lack of a double bond in the 4-position makes 1-DHEA invulnerable to aromatization, vastly increasing its safety profile.

*Dose Considerations:*

The appropriate dose of 1-dehydroepiandrosterone for human consumption was determined from reference to well-tolerated doses of DHEA, a similar adrenal hormone. Based upon the rationale that 1-dehydroepiandrosterone has a similar level of safety in comparison to DHEA (19), clinical studies have been found showing that the use of up to 200 milligrams per day for 6 months is both safe and well-tolerated by humans (19). Additionally, the compound is currently on sale as a dietary supplement and is in the food supply at 4-8 times our recommended dose. Therefore, we conclude that this compound is safe when used as intended.

4.3.2 *Regulatory Status:*

1-dehydroepiandrosterone is not a drug, nor has it ever been marketed as such in the United States.

4.3.3 *Pharmacokinetics:*

The compound and its direct isomers are well known and well studied in humans and other mammals (1-19).

4.3.4 *Toxicity:*

We do not know of references for toxicity data other than the reported history of safe use.

4.3.5 *Clinical Data:*

We do not know of clinical references for this compound.

## ***Section 5***

1-dehydroepiandrosterone is present in the food supply and has been adequately shown through experience based on “common use in food” to be “safe” for use as a dietary supplement.

## ***References***

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