



EL PASO INTELLIGENCE CENTER

EPIC TRANSPORTATION UNIT BULLETIN EB06-23

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**Milk and Bovine Protein Products and
False Positives on LSD Field Test Kits**

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May 19, 2006

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1. Summary:

Samples of suspected drugs from three United Parcel Service (UPS) packages/parcels recently seized by Customs and Border Protection (CBP) Officers at Louisville, Kentucky, apparently returned false positive responses for lysergic acid diethylamide (LSD) when tested with standard drug field test kits. The UPS parcels bore falsified customs declarations, and each contained an unidentified white powder that was clandestinely packaged. Preliminary results of CBP laboratory tests identified (a sample of) the white powder as "bovine serum albumin," a bovine/dairy-derived protein, which, depending upon the actual source, may possibly be regulated.

2. Seizure Incidents:

On May 3, May 4, and May 7, 2006, three shipments of a white powdered substance suspected to contain LSD were seized by CBP Officers at the Louisville, Kentucky, UPS Worldport air express facility (a.k.a. "the Louisville UPS Hub"). The shipments contained (respectively) 117, 111, and 270 grams of an unidentified white powder, each was packaged in a large UPS shipping envelope, and in each case the contents were falsely listed as "documents" on the attached international customs declarations. A physical examination of the contents of the envelopes revealed that they actually contained a white powder that was packaged in a manner consistent with illicit drug smuggling. The envelopes were allegedly being sent from a business address in the Netherlands (a source country for hallucinogens like MDMA/Ecstasy) to an individual in Argentina. When samples of the white powder from each shipment were tested with drug field test kits, the results were positive for the presence of LSD.

3. Shipment Packaging:

In each shipment, the unidentified white powder was contained in a vacuum or heat-sealed plastic bag, which had been pressed flat and measured approximately 8 1/2 by 11 inches. The flattened plastic bags were sandwiched between two pieces of posterboard-type cardboard measuring approximately 10

by 12 inches, which were sealed with tape along the edges. The cardboard "sandwiches" were further contained in large paper envelopes that measured approximately 16 by 18 inches and bore the addresses of the shipper and recipient. Lastly, the large paper envelopes were sealed in a large plastic UPS shipping envelope. (photos courtesy CBP Louisville, KY, UPS Hub)



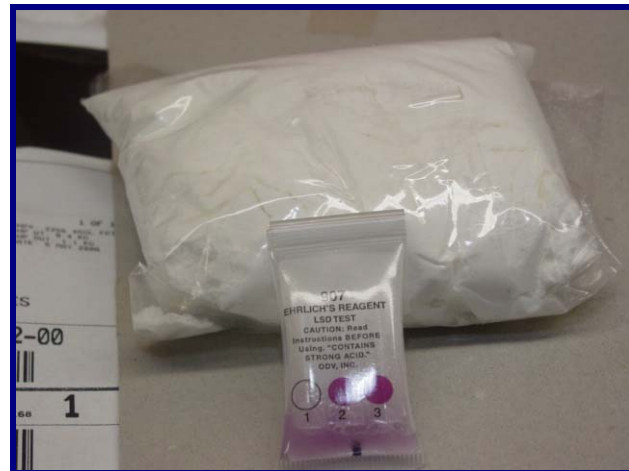
cardboard "sandwich," UPS shipping envelope, and inner paper envelope



cardboard peeled apart revealing flat plastic bag of white powder



flat plastic bag of white powder removed from outer packaging



plastic bag of white powder and Ehrlich's Reagent Test for LSD

4. Manufacturer/Shipper/Consignee:

A. The shipper of the envelopes was listed as: "DMV International, NCB Laan 80, Veghel, NL." The internet web-site for DMV International, www.dmv-international.com, indicates that the company is the industrial products division of Campina bv, one of the largest dairy cooperatives in Europe, and that they "develop and produce functional and nutritional ingredients for the food, nutrition, and pharmaceutical industry worldwide." They manufacture food additives for products such as ice cream deserts, various food and nutrition products with whey-based ingredients, and pharmaceutical grade lactose for "direct compression and dry powder inhalation." The company also has "25 years experience in protein separation, hydrolysis, and enzyme technology for the production of protein hydrolysates and bioactive peptides." The web site lists 72 food-related products, 36 nutrition-related products, 10

pharmaceutical-related products, and 22 "microbial nutrition"-related products. DMV International has production, and research and development facilities in Europe and the United States; sales offices in Europe, Asia, and The Pacific, and in the Americas; and is headquartered in Veghel, The Netherlands. The web-site lists the company's full name and address as: DMV International bv; NCB-laan 80, 5462 GE Veghel; P.O. Box 13, 5460 BA Veghel; The Netherlands. Other open-source information indicated that DMV International operates three plants at its headquarters in Veghel. One of the plants manufactures milk proteins; one manufactures pharmaceutical lactose; and one manufactures food ingredients including fatty and non-fat concentrates for use in soups and sauces, as well as ingredients for toppings, coffee creamer, ice cream, yogurt, and many other foods.

B. The recipient of the envelopes was listed as: "T. Bekker or Tjalling Bekker, Uriburu 1001 Boating Club Beccar, Buenos Aires, AR." (Analyst note: CBP Louisville Officers advised that their research indicated that the individual T. Bekker/Tjalling Bekker may be associated with the company DMV International.)

5. Field test kits and results:

The shipments of white powder seized on May 3, May 4, and May 7, were tested with The ODV Incorporated, NarcoPouch test number 907 "Ehrlich's Reagent LSD Test," and the results were positive for the presence of LSD. (Analyst note: The ODV Incorporated, NarcoPouch test number 907 "Ehrlich's Reagent LSD Test," utilizes the "Ehrlich's Modified Reagent" to presumptively identify LSD. The test kit employs a small, heavy plastic pouch with three glass ampoules of chemical test agents. Instructions supplied for the tests state that it is "a test for hallucinogens"....and that during the test, "a slowly developing (30-60 seconds) purple color is indicative of the presence of LSD or other ergot alkaloids.")

6. CBP Laboratory Results:

CBP Officers at the Louisville UPS Hub indicated that a sample of the white powder seized on May 3 was submitted to the CBP regional laboratory at Chicago, Illinois, for analysis. Preliminary results provided by the CBP lab indicated that there was no LSD present in the white powder that had been submitted for analysis, and that the white powder had been identified as "bovine serum albumin." (Analyst note: "Bovine serum albumin" is a protein that can be derived from bovine blood, and it is also present in milk products including whey. Bovine serum albumin derived from bovine blood is used in medical, pharmaceutical, and biological research; and dairy-derived whey products are used as food additives as well as nutritional protein substitutes. Since DMV International specializes in dairy-derived products, the bovine serum albumin identified in the white powder sample submitted to the CBP lab was probably derived from cow's milk.)

7. DEA Special Testing and Research Laboratory Information:

Coordination with the DEA Special Testing and Research Laboratory at Dulles, Virginia, has indicated that the drug field test kits for LSD (like the ODV NarcoPouch test number 907) that employ Ehrlich's Modified Reagent actually test for the presence of a characteristic in a chemical compound's structure known as an "indole group." LSD, which is a single chemical compound, contains an indole group within its molecular structure to which the Ehrlich's Modified Reagent test reacts positively. Milk is composed of a variety of chemical compounds. Some of the compounds in milk (and milk-derived products) also contain an indole group, and it is the indole group that provokes a positive reaction from the Ehrlich's Modified Reagent test. Based on this information, field test kits that employ Ehrlich's Modified Reagent react to a unique (but psychoactively benign) element in the chemical makeup of bovine serum albumin and other milk protein products, and as such, have apparently provided false positives for LSD. The DEA Special Testing and Research Laboratory advised that the only way to confirm that a sample of suspected drugs contains LSD (or another hallucinogen), is to submit it for a

bonafide laboratory analysis, where more specific and reliable tests can be performed. (Analyst note: Further information on ODV Inc. and NarcoPouch test kits can be obtained at the company's internet web site: www.odvinc.com.)

8. Additional Information:

On May 10, 2006, CBP officers at the Louisville UPS Hub intercepted a shipment of dairy protein products from DMV International that was being sent to a commercial recipient in Santiago, Chile. In contrast to the suspicious packages that were seized on May 3, May 4, and May 7, the contents of this package were legitimately declared. The package (a cardboard box) weighed 1.7 kilograms, and its contents were listed as "Proteina de Leche." When the package was opened, it was found to contain three plastic bags of a white powdered substance (apparently product samples), and miscellaneous businesses/product-related documents. Among the documents were three DMV International laboratory "Certificates of Analysis," which appeared to apply to the three bags of white powder. Each of the certificates provided information on the following dairy protein products: "Milk Protein type Calcium Caseinate EM9-N," "Milk Protein type Instant Calcium Caseinate," and "Milk Protein type Calcium Caseinate Spray." Each of the certificates listed the results of a laboratory analysis of the products, which included their specific protein content, chemical makeup, and a microbial analysis. Significantly, when material from the bags of white powder was tested with the NarcoPouch Ehrlich's Reagent LSD Test 907, strong positive results (color change) were obtained for the presence of LSD.

9. Discussion and Analytical Comment:

A. The shipment of milk protein products from DMV International to Santiago, Chile, appears to be completely legitimate, and may serve as an example of the type of product samples that DMV International probably routinely ships to potential customers worldwide. According to the CBP laboratory results, the three shipments of clandestinely packaged white powder that were being sent from DMV International to Buenos Aires, Argentina, apparently contain a similar milk- or dairy-derived protein product. What remains unanswered is why sample-size quantities of what apparently were dairy-related products, were being sent by a legitimate company to a recipient in Buenos Aires packaged in a concealed manner. It may be speculated that, as agriculturally-related products, the shipper and/or recipient may have been attempting to circumvent Argentinean agricultural restrictions or regulations that may have impounded the material for a prolonged period.

B. This particular incident may have identified a potential problem with the Ehrlich's Reagent LSD field test kit. If this type of test kit routinely provides a positive response for LSD when milk protein products are tested, then this is a fact that law enforcement officers who use the test should be made aware of. It is recommend that users of these drug field test kits check with their local forensics lab, their suppliers, and/or the test kit manufacturer, to determine if the test has any known false-positive problems associated with it.

10. If you have any questions or comments in reference to this report, please contact the EPIC Research and Analysis Section, Transportation Unit, IA Jeff Jasek at (915) 760-2720, or the Transportation Unit Chief Michael Logsdon at (915) 760-2724.

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