U.S. Department
of Transportation

**Research and
Special Programs
Administration**

400 Seventh Street, S.W.
Washington, D.C. 20590

APR - 4 2000

Mr. William Warder
Air Freight Center, Inc.
Kansas City International Airport
P.O. Box 20104
Kansas City, MO 64195-0104

Ref. No. 00-0067

Dear Mr. Warder:

This is in response to your letter dated February 29, 2000, and subsequent telephone conversation with a member of my staff regarding the applicability of a vinegar solution (acetic acid) to the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Your questions are paraphrased and answered as follows:

Q1. Does the U.S. Department of Transportation and the Food and Drug Administration have a memorandum of understanding on how to properly class vinegar/acetic acid?

A1. The answer is no.

Q2. Does the HMR regulate an acetic acid solution that contains vinegar at a concentration greater than 11 percent?

A2. Any material, regardless of its intended purpose, that meets the definition of a hazardous material in § 171.8 is subject to the HMR. Under § 173.22 of the HMR, it is the shipper's responsibility to properly class a material. This office does not perform that function.

Q3. Can corrosivity test results for a food grade acetic acid solution (e.g., 10 percent vinegar and 90 percent water) be applied to a non-food grade acetic acid solution with the identical concentrations?

000067

173.22

A3. The answer is yes. DOT does not make a distinction between a food grade and non-food grade acetic acid solution.

We hope this satisfies your request.

Sincerely,

John A. Gale
Transportation Regulations Specialist
Office of Hazardous Materials Standards

PHONE (816) 243-5535

AIR FREIGHT CENTER, INC.

KANSAS CITY INTERNATIONAL AIRPORT

P.O. BOX 20104 KANSAS CITY, MO 64195

BDH
§173.22
00-0067

Mr. Edward T. Mazzullo, Director
Office of Hazardous Materials Standards
Research and Special Programs Administration
US Department of Transportation
400 Seventh Street, S.W.
Washington, D.C. 20590

Tuesday, February 29, 2000

Dear Mr. Mazzullo,

My client is contemplating a new venture, the distribution of vinegar and/or acetic acid. On one hand the Hazardous Materials Table §172.101 in the Hazardous Materials Regulation (HMR) is very clear. The table lists, "acetic acid solution, *with more than 10 percent and less than 50 percent acid, by mass*", as class 8, UN2790, packing group III, a regulated substance. On the other hand while vinegar is not listed in the HMR; vinegar is defined as a food by the FDA which may contain a mass of acetic acid far greater than 11%. What's more, The FDA prohibit converging or applying the definition of vinegar with the definition of acetic acid (enclosure).
Question(s):

1. Is there a Memorandum of Understanding (MOU) with FDA on vinegar/acetic acid?

2. Is vinegar containing eleven percent or more acetic acid regulated by the HMR?

3. Can acetic acid be included in skin tests conducted with vinegar if both are dilute 11% or greater acetic acid solutions, especially if or when §173.136(b) may apply?

Classification of this product, acetic acid/vinegar, is new to my client and application of the HMR will depend on the DOT interpretation. Food manufacturers have a different opinion for vinegar and currently, may not be shipping vinegar as a HMR regulated substance.

Should you require any other specific information on package size, intended end use or other necessary information about vinegar/acetic acid please do not hesitate to contact me, Bill Warder, at Air Freight Center, Inc., voice 816 243 5535; fax 816 243 5581. Your assistance in helping us properly identify vinegar/acetic acid for transportation will be very much appreciated.

Sincerely,

William G. Warder, Agent

Enclosure: (1) Edited excerpts, Food Drug and Cosmetic Act

Federal Food, Drug, and Cosmetic Act

Edited Excerpts

Sec. 525.825 DEFINITIONS
Vinegar

No standards of identity for vinegar have been established under the Federal Food, Drug, and Cosmetic Act. Historically, definitions have been developed for different types or combinations of types of vinegars.

POLICY:
FDA considers the following to be satisfactory guidelines of vinegars:...
Natural vinegars as they come from the generators normally contain in excess of 4 grams of acetic acid per 100 mL. *(Emphasis and comment added by author: This definition results in a solution containing 12% or more acetic acid. Retail products are [usually] diluted; reference:*
H J HEINZ – DISTILLED WHITE VINEGAR
MATERIAL SAFETY DATA SHEET
NSN: 895000N048492
Manufacturer's CAGE: 73137
Part No. Indicator: A
Part Number/Trade Name: DISTILLED WHITE VINEGAR)

Sec. 562.100 Acetic Acid - Use in Foods...

Acetic acid, if of suitable purity and used in accord with good manufacturing practices, is generally recognized as safe for use in foods. It should not, however, be used under conditions which result in consumer deception, such as may result from substitution of dilute acetic acid for vinegar in "pickled" foods. Food Inspection Decision 140, issued February 27, 1912, included the following: "Acetic acid diluted - The product made by diluting acetic acid is not vinegar, and when intended for food purposes must be free from harmful impurities and sold under its own name."

Organoleptic triangulation findings using distilled vinegar and acetic acid samples showed that distilled vinegar is readily distinguishable from dilute acetic acid. **These findings support our position that diluted acetic acid is not vinegar.**
(Emphasis added by author)