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E. I. DU PONT DE NEMOURS & COMPANY

WILMINGTON, DELAWARE 19898
CENTRAL RESEARCH DEPARTMENT
and Development

HASKELL LABORATORY
FOR
TOXICOLOGY AND INDUSTRIAL MEDICINE

cc: W. M. Branen, PID. N-6537
J. J. Clary
G. P. Reinhardt/J. A. Zapp, Jr.

June 6, 1975

J. W. ADAMS
ENGINEERING DEPT.
L-33W5

ASBESTOS FIBER IN FOOD GRADE ADIPIC ACID

Refs.: Letter, J. W. Adams to C. F. Reinhardt, 6/2/75
Letter, W. M. Branen to C. F. Reinhardt, 6/4/75

In the first reference letter, some quantitative aspects of the use of asbestos gaskets in fluid bed coolers employed in the production of adipic acid are described. The small area of gasket in potential contact with the acid (525 sq. in.) and the large processing rate (35,000-50,000 pounds per hour) of the acid itself have led you to the conservative assumption that the resulting product could contain 2 ppm asbestos.

Based upon the data submitted, I do not believe the potential presence of such a small amount of asbestos in the adipic acid presents a toxicological problem. When the portal of entry of asbestos into the body is the lungs, a toxicological problem has been demonstrated.

A recent publication by P. Gross et al. [Archives of Environmental Health 29 341 (1974)] indicated that the ingestion by rats of a diet containing as much as 5% asbestos over most of their life did not produce cancer. This, in addition to other similar experiments reported in the same article, indicates that ingested mineral fibers, including asbestos, do not present the hazard that has been associated with the inhalation of some mineral fibers.

However, since you state that the theoretical 2 ppm level of asbestos in the adipic acid may in reality be on the high side, it may be prudent to obtain analytical data on the exact amount of asbestos, if any, present in the final product.

Henry Sherman

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HS/ms

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