FOOD MACHINERY AND CHEMICAL CORPORATION

WESTVACO CHEMICAL DIVISION

CABLE "CAUSTIC" NEW YORK
TELEPHONE MURRAY HILL 7-7400

PLEASE REPLY TO
CHRYSLER BUILDING EAST
161 EAST 42ND STREET
NEW YORK 17, N. Y.

September 30, 1953

Robert Kehoe, M.D.
Director, Kettering Laboratories
University of Cincinnati
Cincinnati, Ohio

Dear Doctor Kehoe:

I am up against a problem on which your advice would be very much appreciated and on which my lack of medical education is proving a very serious handicap and upon which there seems to be a regrettable lack of unanimity on the part of those individuals and organizations on whom we depend for toxicological information.

Our Westvaco Chemicals Division and the Niagara Chemical Division of Food Machinery and Chemical Corporation are actively engaged in the production of all sorts of economic poisons. Our South Charleston, West Virginia, laboratories are the primary producers of many of these products and the Niagara Chemical Division is the formulator and distributor. Niagara maintains adequate greenhouse and garden facilities for preliminary screening of a great variety of new compounds produced at Charleston with the hope that they may show suitable merits as economic poisons to justify large-scale field testing and ultimate introduction to the market.

Naturally, an early estimation of the toxic characteristics of these new products (averaging in number 10 or 12 a week) is required. In the past we have relied on a determination of the LD_{50} by oral administration as indicating the degree of toxicity involved. In the December 1952 issue of A.M.A. Archives of Industrial Hygiene and Occupational Medicine there appeared an article by David W. Fassett, M.D., and Robert L. Roudabush, Ph.D., entitled "SHORT-TERM INTRAPERITONEAL TOXICITY TESTS". The authors voiced the opinion that this method of intraperitoneal administration offered advantages over oral administration in

To: Robert Kehoe, M.D. September 30, 1953

that it gave better indication of the probable toxicity of the material when administered by vapor inhalation or skin contact than would the simple oral administration. Please understand that this question applies only to the very first toxicity tests on these new materials. It not infrequently happens that the results of these early tests indicate such a high degree of toxicity to humans and other warm-blooded animals, irrespective of their merits as economic poisons, that we have abandoned further development of these products because we consider their toxic characteristics too high. If the preliminary tests indicate a degree of toxicity falling within what we consider reasonable limits, we then go ahead with further greenhouse and garden screening tests to determine their potential value as economic poisons. These screening tests result in the elimination of upwards of 90% of the samples submitted for testing. The remaining 10% that qualify for further greenhouse, garden, or field testing, we submit for further toxicological examination, including inhalation and skin contact or any other special determinations deemed necessary by the nature of the product, and suitable safety procedures are formulated for the guidance of both our own employees and any outside individuals who may be participating in field tests or ultimate market distribution.

The above is the briefest possible outline of our usual procedures. The question I am raising is whether or not the preliminary toxicity determination of chemicals as determined by intraperitoneal injection is to be preferred to the determination made by oral administration.

As above stated, any information or advice you feel prepared to offer in this connection will be very much appreciated.

With kindest personal regards, I remain,

Sincerely yours,

WESTVACO CHEMICAL DIVISION

Frank S. Low

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