

February 11, 1966

Mr. Harry Raybin
New York City Health Department
125 Worth Street
New York, New York 10013

Dear Mr. Raybin:

I have been asked by Mr. Don Fowler, Director of Health and Safety of Lead Industries Association, Incorporated, through his assistant, Mr. James C. Roumas, to write to you concerning the problem of the release of lead from the glazed surfaces of ceramic ware to be used in the household as tableware and other receptacles for food. Presumably also, I should comment on a test for the extractability of lead from such glazes, and its applicability as a means of assessing the suitability of such glazed ceramic ware for use in the household.

The reason for Mr. Fowler's request of me, which it seems is a response to a request for information from the Department of Health of the City of New York, from Acting Assistant Commissioner Ludwig, arises from the fact that Professor Cholak and I, of the Kettering Laboratory, were the principals in an investigation of a fairly broad representation of tableware in use in the United States, and in the development of a test now known as ASTM test C 555-64-T, for the Determination of Lead Extracted from Glazed Ceramic Surfaces.

I hardly think I need to give you a recital of the events which led up to this investigation, nor to go into the methods and results obtained. I shall be glad, however, to answer, as well as I can, questions that go beyond my statement of our conclusions. Not being entirely certain of what it is that you wish to know, I shall be brief and, I hope, to the point. (Unfortunately, because of my involvement in a series of urgent matters during the last year before my retirement, under the rules of the University of Cincinnati with respect to age, as the Head of the Department of Preventive Medicine and Industrial Health of the Medical School, and the Director of the Kettering Laboratory, I had to postpone the preparation of the formal report of this investigation. Only now, have I had an opportunity to get at it, but it will be some time before it is finished and prepared for distribution.) First, however, let me point out that certain of my associates and I have been engaged, for a long time, among other matters, in examining the sources of lead in the human environment, and in determining the extent to which all of these sources combine to yield an average daily intake of lead in the food and beverages and in the respired air. It is on the background of this information, that we are able to fit the facts concerning household ceramic ware.

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By means of a standardized test (which is very like one that has been used for a long time), now identified by ASTM, it is possible to differentiate satisfactory lead-containing glazes, that will withstand regular use under the usual conditions of the household, from unsatisfactory glazes from which lead can be extracted in undue amounts by various food materials at ordinary or elevated temperatures. Ware that has been in use in this country, generally, as when glazed by reliable methods - methods that have been sanctioned by use and experience and, in the more modern sense, by technical "know-how," will yield a little more or less than 1 part of lead per million parts of the standard extraction medium under the conditions of the test. We have found articles in commercial distribution that will yield ten to twenty times this concentration of lead. (These glazes have been poorly formulated or poorly fired or both, according to knowledgeable people in the ceramic industry.) It appears to me, as a generalization from our data, that there is not much in the way of intermediate findings. In other words, it seems that the ceramic ware in wide use in this country is satisfactory, for the most part, and that the unsatisfactory items are innovations, or the product of technically incompetent people. I conclude from this that there is need for such a test as this within the industry, to check new and experimental products, so as to enable a responsible manufacturer to be sure that he does not exploit, commercially, a product that does not meet the standard. I would think it likely that the lively promulgation and promotion of such a standard within (hopefully throughout) the industry would serve to limit the production and distribution of substandard products within the country, in a fairly effective manner. It remains to deal with the completely independent and uninformed small potter, the non-technical purveyor of "art" products for household use, and the imported products of irresponsible or technically unskilled manufacturers. How much this residue may amount to, and how best to deal with it within the laws and amenities that apply, I cannot judge at this time.

One thing seems reasonably certain to me after some considerable inquiry within the industry. There are no suitable substitutes for lead glazes, if we are to have the qualities in ceramic products that are regarded as desirable from the aspects of aesthetics and durability. I certainly do not believe we can afford to preserve such qualities at the cost of the deterioration of the health of our people. On the other hand, there is not the slightest reason for concern about the contribution that is made by properly tested lead-glazed table and cooking ware to the regular intake of lead of the people in the United States. It is a very minor factor in the total contribution, and my only concern about it is that of holding the line against the introduction of inferior (in the sense under consideration here) products into the households, hotels, and restaurants of this country.

I trust that what I have said above will be pertinent to the present problem of the Department of Health, and I repeat that I shall make every effort to answer any questions that I have not anticipated.

Very truly yours,

RAK:wp

Robert A. Kehoe, M.D.

cc: Mr. Don G. Fowler