

November 22, 1949

Mr. T. L. Henderson,
Engineering Division,
Good Housekeeping Institute,
57th Street at 8th Avenue,
New York City 19.

Dear Mr. Henderson:

Your letter of October 27 has gone unanswered because of my absence from my office on a number of duties for the greater part of the past two weeks. Perhaps I could have answered more promptly if I had had an immediate answer to your question. Unfortunately, there is no quick answer to this question. There is little question in my mind that the problem of lead in paint used on children's toys and furniture is the most serious one which you have raised. None of the other metals or metalloids referred to present anything like the problem of accumulation in the body that is characteristic of lead. All of the other metals referred to are toxic, and in appropriate dosage they can produce acute illness. Such dosage, however, is not too likely to be attained as a consequence of the presence of these materials in paints, whereas in the case of lead the opportunity presents itself all too frequently.

In the case of lead it is a little difficult to say what is really safe. The child is likely to strip all of the paint from the surface of objects in his vicinity, including window sills and the like. The amount of lead that will be absorbed from the alimentary tract of the child is always something of a problem, but it is quite certain that if the child takes in one or more milligrams of lead per day in this manner, he is running some risk of being poisoned. Not infrequently the quantities of lead found in the alimentary tract under these circumstances amount to many milligrams. My personal feeling would be that paints used for these purposes should contain little more than traces of lead compounds. You have stated that you would not consider finishes having more than 100 p.p.m. of lead. One wonders what this means in terms of the dry paint. One also raises the question as to the number of milligrams of lead that would be represented per unit of surface in the case of an object painted with one or more coats of such paint. These are questions that I cannot answer and that makes it difficult for me to answer your main question satisfactorily.

In general the elimination of lead pigments from paints for this

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purpose would be quite satisfactory, for under these conditions one would have only the small quantities of lead that are introduced into driers or that occur as incidental contaminants or other ingredients of the paint. This would certainly improve the situation, with respect to the public health, very appreciably. For this reason I should like to make it as easy as possible for the manufacturer who is making the definite effort to combat the use of lead pigment paints for these purposes. Therefore, I think your standard is probably reasonably satisfactory. In fact, I am not so much concerned about the use of paints containing these low percentages of lead as I am about the fact that the ordinary householder who decides to repaint the baby's bed or play pen goes and buys the nearest paint of the right color that he can find. I am quite certain that this job of redecoration has been responsible for the fatal illness of a number of children. I appreciate the fact that this does not answer your question, but it is that aspect of the problem on which we need general public education. I shall not be so much worried about the small quantities of lead that find their way into the surroundings of small children, if we can manage somehow to eliminate the large sources of exposure.

Sincerely yours,

Robert A. Kehoe, M. D.

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Dictated but not read.

GOOD HOUSEKEEPING

57th street at 8th avenue, new york 19, n.y.

Herbert R. Mayes, editor

THE INSTITUTE

KATHARINE FISHER

director

October 27, 1949.

Dr. R. A. Kehoe, Director
Kettering Laboratory of Applied Physiology,
University of Cincinnati,
Cincinnati, Ohio.

Dear Dr. Kehoe:

I have noticed in the October issue of Heating and Ventilating Magazine reference to work you have done in connection with Industrial Hygiene and Toxicology. I might add that prior to this I had heard from various technical men with paint companies of the work you have done in connection with the toxic effects of certain ingredients used in paints.

We, here at Good Housekeeping Institute, have had requirements with respect to the quantities of lead, chromium, cadmium, antimony, and arsenic in paints used on children's toys and children's furniture. For example, in the case of lead we have not considered finishes having more than 100 parts per million of lead as satisfactory, when the paint is in the liquid state.

I am wondering whether or not you could give us your opinion as to the limits that should be placed on the quantities of the above materials in finishes that would be applied to children's toys, furniture, etc.

Sincerely yours,

GOOD HOUSEKEEPING INSTITUTE

T. L. Henderson
Engineering Division

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