

June 10, 1941

Mr. E. G. Gerwe
Director of Laboratories
The Wm. S. Merrell Company
Lockland Station
Cincinnati, Ohio

Dear Mr. Gerwe:

The problem of the contamination of various materials with lead, as outlined in your letter of June 4th, is an important one, and yet I believe it is not too serious in its hygienic implication. The use of tin-covered sheet lead for containers is not new and, so far as my information goes, it has been accomplished successfully in a number of instances. If the sheets are fabricated properly and handled properly in making tubes or other containers, the lead surface should be covered adequately and the contamination of the contents certainly ought to be minimal. I doubt that even food materials would be seriously contaminated under ordinary circumstances, and when I say this, I am thinking of such things as anchovy paste, sugar pastes etc., which are often put up in tubes. I rather think that this is a question of experience in the fabrication of the containers and, therefore, I believe that such containers ought to be subjected to critical examination and tests so as to demonstrate the satisfactory character of the technique of fabrication. However I believe it can be done properly and adequately.

Obviously some judgment should be exercised with respect to the nature of the materials used in such tubes. On the whole, however, I should say that the most practical way of approach to the problem would be experimentation, in that suitable materials might be introduced into the tubes, allowed to stand for brief periods of time and the lead content tested by analytical means to demonstrate the extent of the contamination, if any. Certainly with most materials the dosage of lead which could be absorbed would be very slight, and in the case of materials with poor solvent action, I would expect it to be essentially negligible.

Since you speak of laboratory methods, I should feel that if you were to do this work yourself, you should make use of one of the methods depending upon the extraction of lead compounds to form color complexes by means of diphenylthiocarbazone. It would be a very easy matter following the technique of Bambach to determine whether or not significant contamination had occurred.

Finally let me assure you that if we can be any help to you in the preliminary consideration of this problem, we shall be glad to do so.

Sincerely yours,

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Robert A. Kehoe, M.D.

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