

June 15, 1934

Mr. E. E. Marbaker
Research Department
Lee S. Smith and Son Mfg. Co.
7325 Penn Avenue
Pittsburgh, Pa.

Dear Mr. Marbaker:

In as much as I shall be away from the laboratory for the next two or three months, I am replying to your letter of June 12th and turning over the correspondence to my associate Dr. W. F. Machle, who will be prepared to work out any subsequent development of this matter if it becomes advisable to proceed before I return.

In view of the prevailing attitude toward the use of lead containing materials, I should advise against your use of the lead compound for the purpose which you have in mind, if it could be avoided. I think it probable that the use of lead in the manner you describe would be in no wise hazardous, but on the other hand, it seems quite probable that its use for this purpose would be questioned, and that if difficulties arose, you would have to be in position to defend yourself not only against criticism but against damage suits. I do not see how protection could be provided except on the basis of experimental work of a very practical sort. In my opinion, it would be advisable to test the solubility of the lead in the "Vinylite" in various acid and alkaline media. This, it would seem, could be done as well in your laboratory as here. It should also be established, I believe, as to whether there is any appreciable solution or disintegration of the dentures under conditions of actual use. The latter would require the cooperation of a suitable subject or subjects, and the fate of the dentures could be determined either by determining the residual lead in them after a definite period of wear, or perhaps by following the lead excretion of the subject with and without the dentures. In any case, I believe experimental work of this general type should be carried out if you consider it worth while to use this type of denture, and if you desire this type of work, we are in position to carry it out for you.

The cost of such work will depend, of course, upon a number of factors such as the employment of a suitable subject or subjects, the duration of the experiment, and the number of analyses which might be required to determine the facts. In any case, the cost of this experimentation would run into some hundreds of dollars. It would perhaps be well for you to determine whether such expenditures are justified before we consider the details of the experimentation which might be carried out. I would suggest that you consider the matter and take it up further with Dr. Machle.

Very truly yours,

RAK:IS

Robert A. Kehoe, M.D.