



Environmental Health Department

W. L. MANN
Manager

October 11, 1971

Dr. J. F. Cole, Sc. D.
Director, Environmental Health
Lead Industries Association
292 Madison Avenue
New York, New York 10017

Dear Jerry:

Re: VITA - Identification of
Lead in Paint

Our technical people have reviewed the Sayre-Wilson rapid screening technique for lead in paint, as proposed by VITA (Volunteers for International Technical Assistance), and offer the following comments:

1. The test is nonspecific in nature because not only lead but also mercury, copper, bismuth, iron, chromium, cobalt and nickel would yield dark stains when exposed to sodium sulfide solution. Mercury compounds are used as fungicides in paint and some of the other elements which form dark colored sulfides could be present as coloring pigments, as metallo-organic compounds added as drying accelerators, or as contaminants.
2. The response of lead (or other cations which form dark colored sulfides) to the spot test reagent would vary in intensity depending on the nature and the age of the paint film, e. g., a latex paint film might be wet more easily by the sodium sulfide solution than an oil-based paint film.

Incidentally, there probably would not be much variation in intensity of reaction with the spot test reagent because of differences in the lead compound used in the paint except that lead chromate could yield both lead sulfide and chromium sulfide.

At best, this test could be used as a screening test to determine those paint films which might contain lead as a component. Even for this purpose, the test has a drawback of possibly not giving a positive test for lead if the paint is not wet by the aqueous sodium sulfide reagent.

I trust the foregoing will be of assistance to VITA in their evaluation of the proposed spot test. We are not aware of any similar spot test that would provide the type of specific information being sought.

Yours very truly,

WLM:cd