

FILE NAME: Drywall Spackling Compounds (DWSC)

DATE: 1975

DOC#: DWSC014

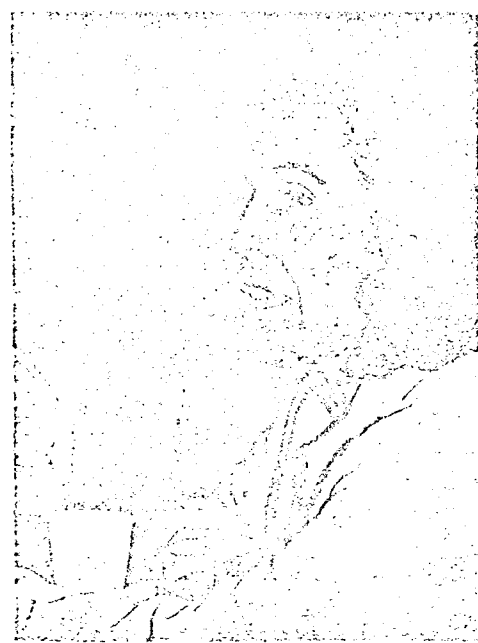
DOCUMENT DESCRIPTION: Newspaper Article & US Dept of Health Press Release

... have been shown for both Duffy "a" and Duffy "b."

Although they have not yet produced an antigen-antibody reaction for Duffy negative, the scientists believe there is a substance there, and that substance provides immunity against vivax malaria.

For example, vivax malaria does not exist in West Africa, where 90 per cent of the population is Duffy negative. Most blacks in the United States also are resistant to vivax malaria, and 63 per cent are Duffy negative.

(Because of these facts, the scientists were able to transfer their labora-



—U.S. Medicine photos

Mary McGinniss

New Standards for Laser Products

Lasers, ranging from low-powered ones producing no harmful effects to those that could cause biological damage from reflected as well as direct exposure. Those which could produce damage must carry warning labels.

Lasers used for medical treatment must, in addition, have a means of measuring the radiation intended to irradiate the human body.

FDA said most of the required standards either already are in use or can be incorporated into existing products at little expense.

Under the regulations, lasers must have protective housing.

Lasers also must have a system for indicating when they are ready for use.

Inverted microscope sequence taken at NIH shows (left to right, from top) invasion of red blood cell by malaria parasite. After attachment by the parasite (arrow) there is marked distortion of the cell, followed by slow invasion.

tory results using monkey malaria to vivax malaria.)

Further, screening showed that all Caucasians tested were Duffy positive.

"This is highly suggestive that the double Duffy negative is the determinant of resistance," Dr. Miller said.

This leads to the possibility—still in the future, however—of developing a neutralizing antibody to the Duffy positive antigen that would block invasion by the malaria parasite.

Such a preventive approach could offer new hope for populations unable to rid themselves of the disease as the United States in effect has through

medication and through environmental controls.

For example, in West Africa, where falciparum malaria—the most virulent of the three common forms, vivax, falciparum and malariae—is prevalent, nearly 100 per cent of pre-school children have the disease. Another form of malaria, Ovale, exists only in West Africa.

If the genetic factor involved in these forms of malaria could be found, a simple vaccine might be developed to stop the growth cycle.

One merozoite, once it penetrates a cell in the laboratory, for example, multiplies into 10 in 24 hours.

Asbestos Minerals Detected In Several Spackling Mixes

RESEARCH TRIANGLE PARK, N.C.—Appreciable amounts of chrysotile or other asbestos minerals were found in samples of spackling and patching compounds analyzed by grantees of the National Institute of Environmental Health Sciences.

The investigators also found substantial amounts of quartz, talc, and other minerals.

Furthermore, air samples obtained during the use of asbestos-containing spackle compounds were analyzed and showed concentrations frequently in excess of the current occupational standard for permissible asbestos exposure levels.

Fiber counts measured during mixing were found to be 7-12 times greater than the current occupational standard. Detectable fiber concentrations were found in adjacent rooms during mixing, and fibers were still suspended in the room air at least 15 minutes after mixing had ceased.

"These findings suggest the possibility of significant asbestos exposure

during home construction and repair," Dr. David P. Rall, NIEHS director, said.

Additional work by the scientists suggests that members of the entire household or other occupants of a building may also inhale asbestos fibers. This could occur during mixing, sanding, or cleaning up of debris," he said.

Dr. Rall said the investigators, all of the Mount Sinai School of Medicine, New York, have accumulated other evidence indicating that far less than the intense exposure of the work environment is capable of producing asbestos-related disease.

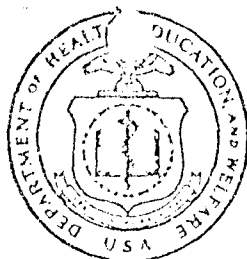
The investigators analyzed 15 representative samples of consumer spackling and patching compounds and 10 of industrial drywall taping compounds for asbestos mineral contents.

Five of the 15 consumer spackling and patching samples contained appreciable amounts of chrysotile or other asbestos minerals, as did 9 of the 10 industrial products.

U.S. Medicine, p. 4, Sept. 1, 1975

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

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Analysis of representative samples of spackling, patching, and taping compounds by grantees of HEW's National Institute of Environmental Health Sciences* has shown that some contain asbestos minerals as well as other potentially harmful substances. Measurements suggest that home repair or construction work involving use of such materials may result in exposure to dust at concentrations sufficient to produce disease.**

Workers exposed to asbestos have been shown to face a greatly increased risk of developing lung cancer, mesothelioma (a rare form of cancer), cancers of the gastrointestinal tract, and asbestosis (a scarring of the lungs). These effects generally do not show up until two or three--and sometimes even four--decades after the first exposure to asbestos.

Recently, Drs. A.N. Rohl, A.M. Langer, I.J. Selikoff, and W.J. Nicholson at Mount Sinai School of Medicine analyzed 15 representative samples of consumer spackling and patching compounds and 10 of industrial drywall taping compounds for asbestos mineral content. These NIEHS grantees purchased four of the

(more)

*The National Institute of Environmental Health Sciences (NIEHS) in Research Triangle Park, N.C., is a component of the National Institutes of Health, one of the six agencies of HEW's Public Health Service. Additional support for this work was provided by the Health Research Council of the City of New York.

**Details of these findings by Drs. Rohl, Langer, Selikoff, and Nicholson are being published in the current issue of SCIENCE.

packling and patching compounds at hardware stores in the New York City area in 1972 or earlier, and the remainder in January 1974.

Spackling and drywall taping compounds consist of finely-grained white powder or premixed pastes. Although Plaster of Paris is supposedly the major constituent, other light-colored materials including clays, micas, quartz, talc, and ground limestone supplement or replace the plaster in many formulations. Additionally, chrysotile asbestos is added to some products, apparently because these minute fibers act as reinforcing agents.

Analysis of the 15 consumer spackling and patching samples has shown that five contained appreciable amounts of chrysotile or other asbestos minerals, as did 9 of the 10 industrial products. Many contained substantial amounts of quartz, talc, and other minerals. Once embedded in the lungs, quartz or silica particles--like those of asbestos--may never be removed. They can produce chronic obstructive and fibrotic diseases after prolonged exposure. Talc also can produce pulmonary fibrosis.

Air samples obtained during the use of asbestos-containing spackle compounds were analyzed and showed concentrations frequently in excess of the current occupational standard for permissible asbestos exposure levels. Fiber counts measured during mixing for example were found to be 7-12 times greater than the current occupational standard. Detectable fiber concentrations were found in adjacent rooms during mixing, and fibers were still suspended in the room air at least 15 minutes after mixing had ceased.

These findings suggest the possibility of significant asbestos exposure during home construction and repair. Additional work by the scientists suggests that members of the entire household or other occupants of a building may also inhale asbestos fibers. This could occur during mixing, sanding, or cleaning up of debris.

(more)

These results are alarming when considered in relation to other evidence being accumulated by the Mount Sinai group that indicates that far less than the intense exposure of the work environment is capable of producing asbestos-related disease. X-ray examination of 210 family contacts who lived with the men who produced asbestos insulation at a Paterson, New Jersey, plant from 1941 to 1954 has shown that 40 percent have the kinds of abnormalities in their lungs common to asbestos workers. In some cases, the worker had been at the Paterson plant for only a few days.

Thus, it appears likely that the use of spackling, patching, and taping compounds containing appreciable levels of asbestos minerals in home repair work may expose the user and other members of the household to concentrations of asbestos that may lead to disease.

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