

June 27, 1974

Minutes of the meeting of the CTFA Task Force on Methodology for the Detection of Asbestos in Talc held at the Johnson & Johnson Research Center, June 21, 1974.

Present were the following:

Affiliation

F. Robert Rolle, Task Force Chairman	Johnson & Johnson
Ian Stewart	McCrone Associates
D. Harris	Cyprus Industrial Minerals
C. S. Thompson	R. T. Vanderbilt
Dave Hamer	Johnson & Johnson
Walter Luckewicz	Avon
John Schelz	Johnson & Johnson
George Sandland	Bristol Myers

1. Mr. David Hamer discussed the most recent version of the FDA proposed optical microscope method for the determination of asbestos fibers in talc. The only difference between this method and the earlier method is that the area of the sample to be scanned is reduced, thereby reducing the time of analysis. The method is still unacceptable, however, for all the reasons given in the December 10, 1973 CTFA report, "Report of CTFA Talc Sub-committee on Method to Detect Chrysotile and Tremolite in Talc".
2. The Rose¹ dye procedure for the detection of chrysotile in talc has been evaluated by Dr. C. S. Thompson, and he finds it non-specific. For example, the serpentine minerals antigorite and lizardite also show adsorption of the dye. He further pointed out that the method is very time consuming. Dr. T. Baak (Cyprus Ind. Minerals) in an earlier communication reported that the mineral palygorskite would act in a manner similar to chrysotile by this method. Mr. W. Luckewicz reported that the particle size of the chrysotile would have a dramatic effect on any attempted quantitation of chrysotile by this analysis.
3. The infrared method proposed by Mr. W. Luckewicz and evaluated by Bristol Myers has been shown to be specific for the detection of tremolite in talc. The level of detectability is about 1% by weight.
4. The "cookbook" transmission electron microscope procedure of Pfizer for the detection of chrysotile in talc was found acceptable, however, Mr. Ian Stewart would prefer to quantify by area count rather than "eyeballing" against a spiked standard.
5. The "cookbook" Differential Thermal Analysis (DTA) procedure of Johnson & Johnson and Avon, for the detection of serpentine in talc, was accepted by the committee. The minimum level of detection is 0.5-1% by weight.
6. The "cookbook" x-ray fluorescence procedure for the determination of tremolite in talc, followed by dispersion staining in the event of a positive reading, was accepted by the committee.
7. The "cookbook" x-ray diffraction method for the detection of amphibole minerals in talc by Cyprus and Pfizer was accepted by the committee. The lower limit of detection was set at 0.2-0.5% by weight.

¹ Rose, H. A. "Detection and Determination of Chrysotile in Talc"