

The investigators recognized these limitations and stated, "5 mppcf may be regarded tentatively as the threshold value for asbestos-dust exposure until better data are available."

What about the impinger collection technique that was used in this study to determine the degree of dustiness? The standard impinger method was used because it was the accepted means for assessing the dusty trades. Although it still retains that function today, the trend is toward the respirable fraction and gravimetric means of assessment.

In the impinger, air is drawn through a glass jet set at a fixed distance from the bottom of a flask. The jet is immersed in water, alcohol, or a mixture of both. As the particles strike the bottom of the flask they become suspended in the liquid. Collection efficiencies vary but are generally on the order of 98% for particles greater than 1 to 2 μm .

The sample must be counted within 24 hours of collection. This is to reduce the chance of the particles to flocculate or for some small particles to go into solution. A sample is withdrawn from the collecting flask and placed into a counting cell. The counting cell should be no more than 1 mm and no less than 0.25 mm in depth. Settling times of the particles in the cell vary depending on their size, density, and the collecting media. The period to allow for particle settling varies from 20 to 30 minutes. All of the particles will not settle in this time span. Once started, the count must be completed within ten minutes. All of these factors have to be recorded in order to reduce the known variabilities when comparing studies involving dust counting.

DUP 0902027