

the comments above concerning the possibility of drawing fibers right through the "Ottway" sampler.

Opaque filters possess one disadvantage in that they tend to distort when mounted, particularly in warm weather and therefore become rather difficult to count. Further work was therefore undertaken on cleared membranes, glycerol triacetate ("Triacetin") being chosen as the clearing liquid. The samples were counted under phase contrast conditions at a total magnification of $480\times$, using a 4mm. achromatic objective, later increased to $540\times$ using a 3.75mm. fluorite oil immersion objective. It may be argued that phase contrast illumination should not be necessary when using a liquid such as "Triacetin" with a very different refractive index from that of chrysotile, but there is no doubt that phase contrast can increase the count (see FIGURE 5) and improve the visibility of a fine fiber in the sample. Comparison with opaque membrane counts was very good as shown in FIGURE 6 where the correlation coefficient is 0.95. Based on this work, a standard method of sampling and counting has now been adopted by the members of the Asbestosis Research Council. This is set out in detail in Appendix 1.

Recently, work has been directed at applying the technique of dispersion

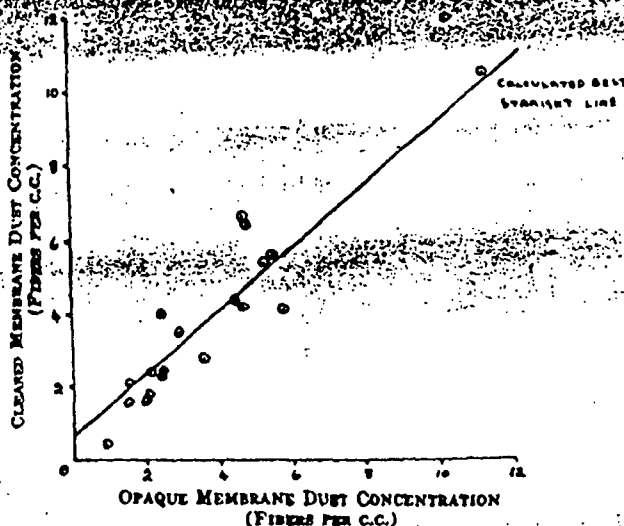


FIGURE 6. Comparison of opaque and "Triacetin" cleared membrane samples. Cleared samples counted in phase contrast illumination ($540\times$). Opaque samples counted in dark ground reflected light ($540\times$).

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