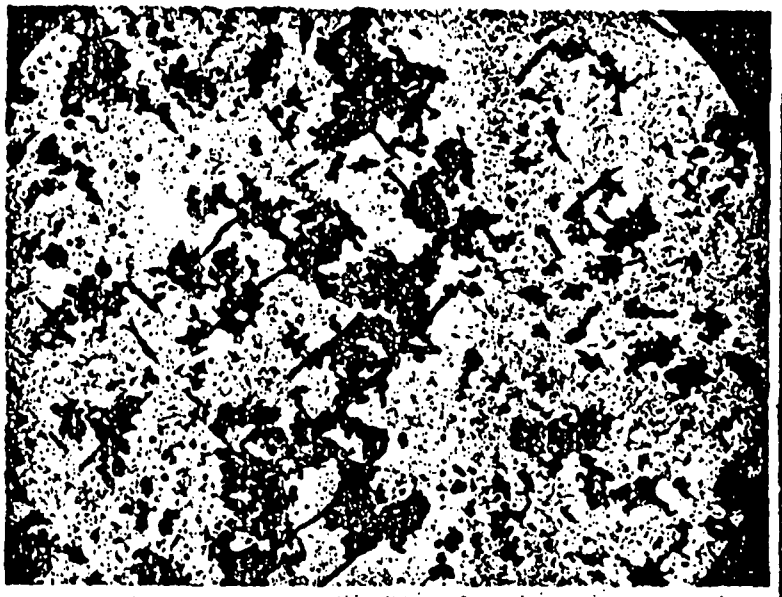

FIGURE 8. Partially ashed Millipore filter (× 100).

Many solid materials are capable of absorbing or adsorbing a variety of substances. For example, asbestos will adsorb gases, liquids, or proteins on its surface.[30,31] When such materials are sufficiently finely subdivided to become aerosolized and inhaled, it becomes conceivable for airborne carcinogenic substances to be adsorbed and concentrated on the filters in physiologically significant quantities. The usual concept of dosage as a fraction of body weight is not applicable in such circumstances. One might consider instead that the significant figure would be the concentration of carcinogen per cell in the vicinity of the aerosol particle.

The mode of body absorption of adsorbed carcinogens from mineral or other dusts is not well understood. For example, benzypyrene disappears quickly from soots in the lungs presumably by elution in plasma or cell fluids in spite of its comparative insolubility.[32] Benzypyrene fed to chickens and mice produces fluorescence in the skin and viscera. When feeding is discontinued the fluorescence disappears rapidly.[33] It is noteworthy that 3, 4 Benzypyrene is insoluble in H_2O and aniline but soluble in serum and sodium desoxycholate derived from bile. In our case, the fluorochromes are apparently tightly bound, either chemically or physically although

TABLE 1

RELATIVE STAINING AND FLUORESCENCE (WITH WOOD'S LAMP) OF CHRYSOTILE WITH VARIOUS DYES

Fluorescence of Dyed Asbestos Fibers	Filter		Wood's lamp 2-23-63		Wood's lamp 2-23-63	Wood's lamp 3-11-63
			In saline	Visual Brightness	In saline sol. 48 hrs.	In saline
0 = Very low or no fluorescence	2	9863	Color change	0 - 10		
Dye						
Auramine MO	0	Red-orange	Brighter	Orange	3 Orange	4 Orange