



FIGURE 6. Many fibers in vicinity of an asbestos body.

leaving the fiber, the suspending solution remaining clear. The fibers become highly stained and brightly fluorescent in ultraviolet. In these experiments we used long-fibered Canadian chrysotile of both the soft and hard varieties. The best dye (as judged visually by the brightness of its fluorescence) is berberine sulfate. We were also able to render eight other varieties* of commercially available asbestos brightly fluorescent with these dyes: (1) Anthophyllite acid treated (S. Carolina) — Haveas; (2) amosite — Long grade brown (Rhodesia); (3) amosite — Representative grade W-3 (Cape Asbestos); (4) amosite — Longest grade (Cape Asbestos G. W.); (5) amosite — Grade 4 for ceiling tile (Cape Asbestos); (6) crocidolite — Central Blue (Rhodesia); (7) crocidolite — Cape Blue Shortest S. African (Cape Asbestos); and (8) chrysotile — Spinning Grade 3K J.M. (Canada).

Using a technique developed by one of the authors (W. E. S.) for a study of the carcinogenicity of asbestos fibers, the berberine tagged fibers in the 1:10,000 dye solution in saline were intubated endotracheally into two adult male Syrian hamsters (approximately 2 mg. asbestos in 0.5 ml.

* Provided by the Asbestos Corporation of America, Norwood, N.J.



FIGURE 7. Ashed slide from saline.

saline). At the time of intubation for approximately two weeks under Nembutal anesthesia ultraviolet (Wood's lamp) which appeared to be in the lungs were not formulating. No fibers were visible in fluorescence using a No. 2 secondary filter in the ocular located by fluorescence uncovered an additional intubation week later. The fibers, again, rule out the possibility by asbestos fibers in the lungs by Falk and Kotliar. The elution of enzyme remaining on the fiber is the fraction that is eluted.

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