

FIGURE 4. Partially ashed fiber and body in alveolus.

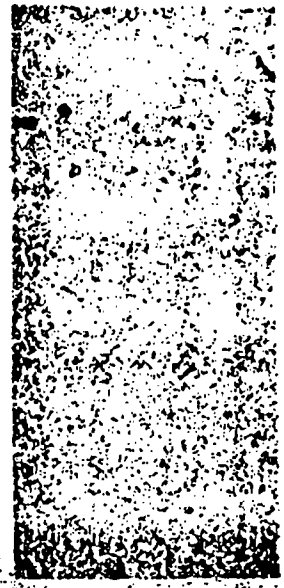

FIGURE 5. Fibers pre

perature asher[23] (Tracerlab Company, California). With sections from which the paraffin has been dissolved with xylol, the ashing rate is approximately 3.5u/minute. After a few minutes the fibers and bodies become clearly visible on a background of tissue ash, which may be rendered hyaline with mounting medium or removed permanently with dilute HCl which leaves the fibers unaffected on a hyaline background. The process may be stopped at a stage in which the tissue outlines are still visible for the determination of localization but with the asbestos fibers and bodies still readily visible (FIGURE 4).

The detection of the fibers is very much facilitated by the use of phase contrast and a mounting medium the refractive index of which matches that of the tissue ash and is sufficiently different from that of the fibers. We have used Harleco synthetic polymer (Hartman-Leddon Co., Phila., Pa.). By using this technique we have been able to find small numbers of fibers in sections (FIGURE 5) in which they were otherwise invisible and much larger numbers where asbestos bodies were present (FIGURE 6). The fibers have passed simple chemical tests for asbestos. They are insoluble in dilute NaOH and HCl.

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No mounting medium has
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important. The supernata
water or saline until all
fluorescent dyes (see TAB
chemical, is formed with
in the original solvent. W
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