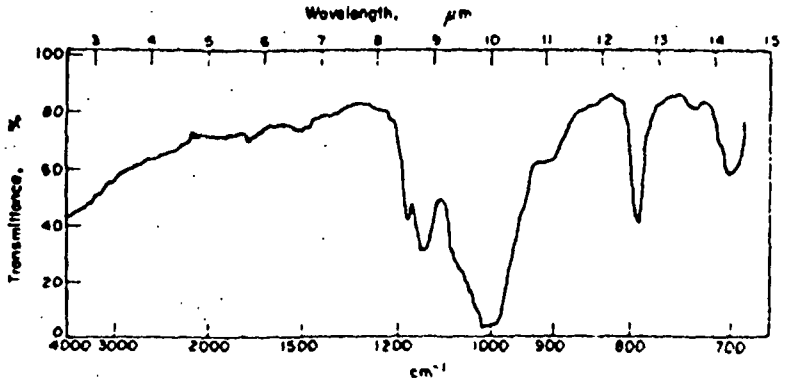


FIG. 5. Infra-red internal reflectance spectrum of Crocidolite.

in this investigation using internal reflectance spectroscopy on the UICC standard reference sample.

There appears to be a wavelength shift to the longer wavelength which may be expected as one changes from transmission to internal reflectance.

The transmission absorption peak at 1639 $cm^{-1}$ has been associated by COBLENTZ (1906) in his early research on both water of crystallization and liquid water.

When the sources of air pollutants in a community's atmosphere are being sought, or when an undesirable effect of air pollutants is being investigated, it is important to be able to determine the probable sources and types of the pollutants. Various types of asbestos have been implicated in varying degrees in human diseases.

Heretofore, it was necessary to rely upon a highly skilled microscopist, visual or electronic, to distinguish between the major types of asbestos that are used in production at any one time.

This investigation attempted to use an instrumental technique that might lend itself to a totally numerical, and, therefore, computerized, identification system for a larger number of samples with less manpower and lesser manpower skills.

The continuing investigation is extending the technique to the characterization of air pollution soiled and otherwise spoiled surfaces and to extend the technique of asbestos identification to smaller quantities above and in the presence of other pollutants. Sample preparation techniques such as slow ashing will be investigated, together with spectrum signal peak amplification and masking.

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