



MINERAL OIL PREPARATION

A mineral oil preparation refers to the specimen-containing glass slide that is to be examined using a microscope when attempting to confirm a clinically suspected diagnosis of scabies. A skin scraping is the procedure usually used to create a mineral oil preparation. This procedure is rapid, easy to accomplish, and able to be performed--without anesthesia--in the examination room.

A few drops of mineral oil are placed on a glass microscope slide. The blade of a #15 scalpel is dipped into the oil. A superficial scraping or shaving of the epithelium of a suspected lesion is performed with the oil-laden blade of the scalpel. This action may be repeated at the same site, as many times as is deemed necessary, in order to provide an adequate sample of the upper most layers of epidermis for evaluation. The scalpel blade is used to gently pick up the skin sample and residual oil which is carefully deposited on the surface of the microscope slide by passing the blade against the edge of the glass. A glass cover slip may be placed on top of the oil-containing specimen, but this is usually not necessary.

Burrows are superficial canals within the epidermis that may contain either the organism, its progeny, or its excrement. Therefore, they are the ideal lesions from which to obtain specimens for a mineral oil preparation. Burrows are often located in the web spaces between the fingers.

The diagnostic yield may be increased by obtaining samples from several locations before evaluating the mineral oil preparation. Once all of the specimens have been collected, a light microscope is used to evaluate the preparation. Screening of the preparation can be done at a lower magnification (2X or 4X) and closer inspection can be done at a slightly higher magnification (10X).

A mineral oil preparation is positive for the diagnosis of scabies when either the mite, the eggs, or the fecal concretions (scybala) are observed.

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