



KOH PREPARATION

The KOH-digested (potassium hydroxide) direct microscopy of specimens is a simple and accurate tool for detection of fungal infections. Direct microscopy is used to examine scale, nail, and hair treated with KOH (10-20% potassium hydroxide solution, often dissolved in glycerol 20% and sterile distilled water). The fungal digest is then viewed under the microscope. Sometimes, lactophenol cotton blue, Parker Blue® ink, Blankophor®, or Calcoflour® white may be added to highlight the fungal elements. With Calcoflour® white or PAS staining, the sensitivity may increase to 90%.

The scraping or clipping is placed on a slide and KOH solution is dropped on it. The process is hastened by heating with the flame from a match or an alcohol lamp. The slide is then viewed for presence of fungal hyphae (dermatophytes and molds), clustered and thick walled small yeast cells with short filaments (*Malassezia* sp.), and budding yeast cells and pseudohyphae (*Candida* sp.). No laboratory test is ever 100% accurate.

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