10% POTASSIUM HYDROXIDE

INTENDED USE
Remel 10% Potassium Hydroxide is a reagent recommended for use in qualitative procedures to detect fungal elements in clinical specimens by microscopic examination.

SUMMARY AND EXPLANATION
The Laboratory Handbook of Medical Mycology recommends the use of 10% KOH for direct detection of fungal elements in clinical specimens.\(^1\) The KOH preparation, when positive, provides valuable clues as to the etiologic agent of infection. McGowan reported the use of 10% KOH, but warned that a lack of contrast between fungal elements and clinical material may occur.\(^2\) Therefore, phase contrast microscopy for improved visibility is recommended.

PRINCIPLE
KOH acts to disrupt cellular sheets or clumps of proteinaceous debris that may be present and clears the specimen for easier fungal detection.\(^3\) The addition of glycerol to the KOH solution reduces the amount of precipitation that forms in the reagent container and also helps prevent KOH preparations from drying.\(^4\)

REAGENTS (CLASSICAL FORMULA)*
- Potassium Hydroxide (CAS 1310-58-3)…………………..100.0 g
- Glycerol (CAS 56-81-5)……………………………..100.0 ml
- Demineralized Water (CAS 7732-18-5)………………… 800.0 ml

*Adjusted as required to meet performance standards.

PRECAUTIONS
DANGER! Corrosive. Causes eye and skin burns. May be harmful if swallowed. May cause severe respiratory tract irritation with possible burns. May cause severe digestive tract irritation with possible burns. This product is for In Vitro diagnostic use and should be used by properly trained individuals. Precautions should be taken against the dangers of microbiological hazards by properly sterilizing specimens, containers, and media after use. Directions should be read and followed carefully. Refer to Material Safety Data Sheet for additional information.

STORAGE
This product is ready for use and no further preparation is necessary. Store product in its original container at 2-30°C until used. Allow product to equilibrate to room temperature before use.

PRODUCT DETERIORATION
This product should not be used if (1) the color has changed, (2) the expiration date has passed, or (3) there are other signs of deterioration.

SPECIMEN COLLECTION, STORAGE, AND TRANSPORT
Specimens should be collected and handled following recommended guidelines.\(^5,6\)

MATERIALS REQUIRED BUT NOT SUPPLIED

PROCEDURE
1. Place a drop of 10% KOH in the center of a clean, glass slide.
2. Place specimen in 10% KOH, cover with a coverslip, and press gently to make a thin mount.
4. Examine the slide for fungal elements by bright field or phase contrast microscopy.

INTERPRETATION
Examine the slide microscopically on low power and confirm observations with high power. Observe for hyphae, spores, conidia, budding yeast, spherules, or sclerotic bodies. Consult appropriate references when necessary.\(^7\)

QUALITY CONTROL
All lot numbers of 10% Potassium Hydroxide have been evaluated and found to be acceptable. Testing of control organisms should be performed in accordance with the quality control procedures established by each laboratory following their state and local regulatory requirements. If aberrant quality control results are noted, patient results should not be reported.

LIMITATIONS
1. Gentle heating may speed the activity of the KOH, but it may be harmful to the specimen if overdone.\(^1\)
2. A drop of Lactophenol Aniline Blue or Calcofluor White may be added to 10% KOH to enhance visibility of fungal elements.
3. Cotton swabs should not be used in slide preparations as the cotton strands resemble hyphae.\(^1\)
4. Potassium hydroxide preparations are presumptive and should not be substituted for culture and identification.
5. Prolonged exposure to KOH will eventually be destructive to hyphal elements.

BIBLIOGRAPHY

PACKAGING
REF R21230, 10% Potassium Hydroxide…………………..25 ml/Btl

Symbol Legend
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