HEALTH HOLDING

HAFER ALBATIN HEALTH CLUSTER
MATERNITY AND CHILDREN HOSPITAL

Department:	Laboratory and Blood Bank (Microbiology)		
Document:	Internal Policy and Procedure		
Title:	Potassium Hydroxide Test		
Applies To:	All Laboratory Staff		
Preparation Date:	January 06, 2025	**Index No:**	LB-IPP-142
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1. PURPOSE:

1.1 To establish system and responsibilities for processing KOH test for detection of fungal elements.

2. DEFINITONS:

2.1 KOH: Potassium Hydroxide.

3. POLICY:

3.1 Used commonly in suspected cases of dermatophytosis, i.e. fungal infection of skin, hair, or nails that contain keratin.

3.2 Also used for specimens such as sputum, pus, urine sediment, homogenate from biopsy tissue to clear cell debris.

4. PROCEDURE:

4.1 It is usually used depending on the specimen; occasionally 40% is also used.

4.2 **Preparation of the mount:**

- 4.2.1 Take a clean grease-free glass slide.
- 4.2.2 Place a large drop of KOH solution with a Pasteur pipette.
- 4.2.3 Transfer small quantity of the specimen with a loop or the tip of a scalpel into the KOH drop.
- 4.2.4 Put a clean cover slip on gently so that no air bubble is trapped.
- 4.2.5 Place the slide in a moist chamber, and keep at room temperature.
- 4.2.6 Skin scales usually take 20-30 minutes; pieces of nail may take several hours to clear.
- 4.2.7 Sometimes overnight contact with KOH is useful for getting a positive result.
- 4.2.8 Clearing can be hastened by gentle heating of the slide, but it is best avoided.

4.3 **Examination:**

- 4.3.1 Examine the clear specimen under low power (10X objective).
- 4.3.2 Scan the entire cover slip from end to end in a zigzag fashion.

4.4 **Modification:**

- 4.4.1 For more distinction, stains like methylene blue or Parker blue black fountain ink may be used along with KOH.
- 4.4.2 This will impart a coloured background and fungal elements, if present, will show as prominent refractile objects.
- 4.4.3 Reduce the light coming into the condenser.

5. MATERIAL AND EQUIPMENT:

5.1 Reagents: K OH 10-20%, Methylene blue

5.2 Glass slides, Pasteur pipette, plastic loops & cover slides

5.3 Light microscope

6. RESPONSIBILITIES:

6.1 The assigned technician/ technologist assigned for microbiology lab.
6.2 The C. pathology Specialist/ Consultant In-charge.

7. APPENDICES:

7.1 N/A

8. REFERENCES:

8.1 Procedure Manual, Toronto Medical laboratories / Mount Sinai Hospital department of microbiology
8.2 Bailey & Scott's Diagnostic Microbiology. Feingold & Baron;12th. Ed.2007, C.V. Mosby Co. p. 301.
8.3 Clinical Microbiology Procedures Handbook, American Society of Microbiology, Washington DC, 2005.
8.4 Larone, D. (2002). Medically Important Fungi, A guide to identification. 4th Edition. ASM Press. Washington DC, USA.

9. APPROVALS:

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