Ziehl Neelsen Stain Kit

FUCH-KZN-100

Storage conditions

Store at 15 - 25 °C, protected from fire and sunlight. Stability of 2 years under recommended storage conditions.

Procedure duration

~55 min.

Content

A. Carbol fuchsin staining solution (50 ml)
B. Acid solution (50 ml)
C. Methylene blue staining solution (50 ml)

Application

Microscopic examination of Mycobacteria. To demonstrate Leprosy bacilli (*Mycobacterium leprae*) causing leprosy, which are acid fast organisms. Mycobacterial cell walls contain a waxy substance composed of mycolic acids. The property of acid fastness is related to the carbon chain length of the mycolic acid found in any species (Lyon H 1991). This technique combines peanut oil with the deparaffinizing solvent, minimizing the exposure of the bacteria's cell wall to organic solvents, thus protecting the more delicate waxy coat of the organisms.

Method

1. Deparaffinize in xylene/peanut oil mixture, 2 changes, 10 minutes each
2. Drain slides, blot off any excess of oil
3. Rinse in distilled water until slide clears
4. Stain in reagent A, spilled on filter paper over the sample (or filter solution before use) for 30 minutes at room temperature
5. Wash in tap water
6. Differentiate in reagent B until pale pink (about 2 min)
7. Wash in tap water
8. Counterstain in reagent C, spilled on filter paper (or filter solution before use), 20-30 seconds
9. Wash in running tap water and air dry without dehydration in alcohols
10. Lighten in Xylene until slide clears
11. Mount in appropriate medium and examine with immersion objective

Visualization

Leprosy bacilli, hair shafts: Magenta

Background: Light blue

Conclusion

Positive result assures that there are acid resistant bacteria in the specimen. To be confirmed that there are leprae bacilli other examinations should be applied too.