

## Auramine-Phenol Stain

(for Acid Fast Bacilli)

For In-Vitro Diagnostics

For Professional Use Only

Auramine-Phenol stain is used to demonstrate the presence of acid-fast bacilli (mycobacterium species). Auramine stain shows a high sensitivity and specificity than Ziehl-Neelson's method

### Sample Preparation

Heat fixed dried smear

### Mode of Action

Auramine binds to the mycolic acid in the mycobacterial cell wall, which then fluoresces when illuminated with blue-violet or UV light.

### Warnings and Precautions

#### Carbol Fuchsin

Auramine-Phenol is toxic if inhaled or swallowed; causes severe skin burns and is suspected of causing cancer and genetic defects Refer to the Safety Data Sheet.



#### Acid Alcohol

Acid alcohol is highly flammable; harmful if inhaled; it is corrosive and will cause burns to skin, and eye damage. Refer to the Safety Data Sheet.



### Ingredients

#### Auramine Phenol

Substance	CAS	Conc
Auramine	81-88-9	<1%
Phenol	108-95-2	<5%
Ethanol	64-17-5	<10%
Water	7732-18-5	Balance

#### Potassium Permanganate

Substance	CAS	Conc
Potassium Permanganate	7722-64-7	<3%
Sulphuric Acid	7664-93-9	<1%
Water	7732-18-5	Balance

#### Acid Alcohol

Substance	CAS	Conc
HCl	7647-01-0	0 – 1%
Ethanol	64-17-5	Balance

### Specifications

#### Auramine Phenol

Appearance Clear yellowish liquid

#### Potassium Permanganate

Appearance Clear, dark purple solution  
KMnO<sub>4</sub> 0.45% w/v to 0.55% w/v

#### Acid Alcohol

Appearance Clear, colourless solution  
pH @ 20°C < 1

### Stability

The expiry date of each reagent is printed on the label. Store each reagent away in sealed bottle away from heat and light.

This product should not be used if 1) the appearance has changed; 2) the expiration date has passed; or 3) there are other signs of deterioration.

### Technical Procedure

1. Prepare working solution of Potassium permanganate by diluting 1:5 with deionised water (0.1% solution)
2. Cover the fixed smear with the auramine-phenol stain for 10 minutes; Include a positive control smear;
3. Wash off stain with running tap water;
4. Decolourise the smear by covering with 1% acid alcohol for 5 minutes;
5. Wash off acid alcohol with deionised water;
6. Cover the smear with the potassium permanganate solution for about 10 seconds, followed by several washes of water;
7. Allow the slide to dry; Do not blot dry. To prevent fading of the fluorescence,



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protects the stained smear from sunlight and bright light;

8. Examine slide under a fluorescent microscope.

### Results and Interpretation

Only experienced and suitably qualified persons should carry out interpretation of stained slides.

Acid Fast Bacteria	Bright yellow green luminous rodd
Background	Dark

### Notes

- Use only deionised water. Acid fast bacteria may be present in tap/distilled water

### References

*Cheesbrough M. District Laboratory Practice in Tropical Countries, 2<sup>nd</sup> Ed. New York, Cambridge University Press, 2006*

### Ordering

Product	Size	Code
Auramine Aqueous 0.3% in 3% Phenol	500mL	FNNFF055/500
Potassium Permanganate 0.5%	500mL	FNNFG020
Acid Alcohol 1%	5L	FNNACIDAL15