



# Copper Staining Kit

(Catalog # K1487-30; 30 ml; Store at Multiple temperatures)

04/21

## I. Introduction:

**BioVision's Copper Staining Kit** is used for the demonstration of copper deposits in tissue sections using Rhodanine stain. Increased amounts of copper are found in the liver in several disease states such as Wilson's disease. Excess copper can cause liver damage ranging from acute hepatitis and advanced cirrhosis. An excess of copper in the liver is associated with chronic biliary obstruction and chronic hepatitis.

This kit stains as given below:

**Copper Deposits: Light Brown to Red, Nuclei: Blue**

## II. Applications: Histology

## III. Sample type: Fixed Paraffin-Embedded tissue specimens

**Control Tissue** (not provided): Fetal Liver or a known positive

## IV. Contents:

Components	K1487-30	Part Number
Rhodanine Solution (Stock)	30 ml	K1487-XX-1
Acetate Buffer Solution, pH 8.0	2 x 500 ml	K1487-XX-2
Hematoxylin, Mayer's (Lillie's Modification)	125 ml	K1487-XX-3
Mixing/Dropper Vial	1	K1487-XX-4

## V. User Supplied Reagents and Equipment:

- Distilled water
- Coplin jars/Staining jars
- Plastic forceps
- Absolute alcohol
- Synthetic resin
- Xylene or xylene substitute
- Microwave

## VI. Shipment and Storage:

The kit is shipped at room temperature (RT). Upon arrival, the Rhodanine Solution (Stock) should be stored at 4 °C. All other reagents should be stored at RT.

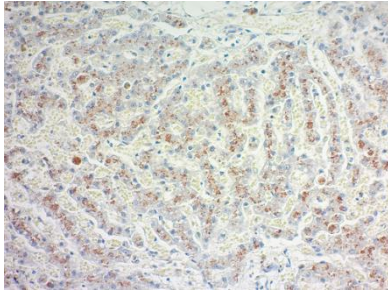
## VII. Reagent preparation:

- Use caution when handling reagents.
- Work in chemical fume hood whenever possible.
- Keep away from open flame.

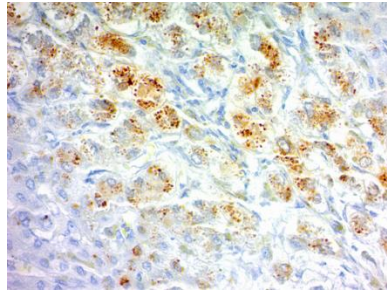
## VIII. Protocol:

1. **Prepare working Rhodanine** Solution in dropper vial:  
Add 4 ml **Rhodanine Solution (Stock)** to dropper vial. Shake the stock Solution immediately before adding Acetate Buffer. Add 46 ml of Acetate Buffer Solution, pH 8.0
2. **Deparaffinize** sections if necessary and hydrate to distilled water.
3. Place loosely capped staining jar containing Working Rhodanine in microwave and **heat solution until warm** but not hot.
4. Place **slide in warmed Working Rhodanine** Solution and microwave at full power until solution is hot. Do not allow solution to boil.
5. Cap container, gently agitate to mix evenly, and allow solution to **cool** on countertop to room temperature with occasional agitation.
6. Examine slide microscopically and repeat **heating/cooling cycle** (steps 3-5) until desired staining intensity is achieved.
7. Rinse slide in 2 changes of **Acetate Buffer Solution**, pH 8.0 for 1 min, shake off excess and repeat.
8. Stain tissue section with **Hematoxylin, Mayer's (Lillie's Modification)** for 5-10 sec.
9. Rinse slide in 3 changes of **Acetate Buffer Solution**, pH 8.0 for 1 minute, shake off excess and repeat twice more.
10. Dehydrate slide in 3 changes of **absolute alcohol**.
11. Clear or wash in 2 changes of xylene or xylene substitute, and mount in synthetic resin.

**A**



**B**



Figures A and B show copper deposits in human liver stained with Copper Staining Kit (Cat. No. K1487) at 20X and 40X magnification, respectively.

**IX. Related Products:**

BioVision Product Name	Cat. No.	Sizes
Gram Staining Kit	K1428	30 ml, 125 ml
GMS Staining Kit	K1427	125 ml
Fite's Staining Kit	K1425	125 ml
Modified Gram Staining Kit	K1429	30 ml, 125 ml
Pneumocystis Stain Kit	K1434	30 ml, 125 ml
Twort's Counterstain Kit	K1436	125 ml
Wright-Giemsa Staining Kit	K1439	30 ml, 500 ml
Warthin-Starry Staining Kit	K1437	125 ml

**FOR RESEARCH USE ONLY! Not to be used on humans.**