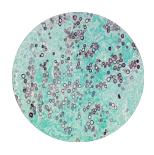
MasterTech S² Stain Kit Instructions for Use



GMS

Kit Item # QS2-GMS

The Modified Gomori Methenamine-Silver Nitrate Stain (G.M.S. Stain Kit) is intended for use in the histologic visualization of fungi, basement membrane and some opportunistic organisms such as Pneumocystis carinii. Pneumocystis carinii is an opportunistic pathogen that causes severe pulmonary disease in humans, dogs, rats, mice and other vertebrate species with acquired, induced, or inherited immune deficiency syndromes. In addition, this procedure will demonstrate Actinomyces and related species, Nocardia asteroids, and certain encapsulated bacteria.

INCLUDES COMPONENTS	Item#	Vials Included	
Dewax Solution	S001-15	1 vial (15mL)	
Chromic Acid Solution, 5%	KC091-15	1 vial (15mL)	
Sodium Bisulfite, 1%	KC094-15	1 vial (15mL)	
Methenamine Solution, 3%	AHM01-15	3 vials* (15mL)	
Silver Nitrate Solution, 0.5%	6816-15	2 vials* (15mL)	
Sodium Borate, 5%	AHSBO5-15	1 vial (15mL)	
Gold Chloride, 0.3%	KC092-15	1 vial (15mL)	
Sodium Thiosulfate, 5%	AHS03-15	1 vial (15mL)	
Light Green Counterstain	STLGC-SF-15	2 vials (15mL)	
Reagent Alcohol, 100%	6900-15	1 vial (15mL)	
15mL Clear Vial with Cap	PC750-100	1 vial (15mL)	

^{*}Not all vials of this solution are required to be loaded on the QS2 instrument for each run. Each reagent component noted as * contains solution for a reduced number of tests to ensure the highest level of staining quality and consistency possible. If multiple vials are required for the particular number of slides being stained, the QS2 instrument will notify you prior to beginning the staining sequence.

STORAGE AND STABILITY

Store Silver Nitrate Solution (0.5%), Methenamine Solution (3%), and Gold Chloride Solution (0.3%) components at $2-8^{\circ}$ C. Do not freeze. All other components can be stored at room temperature. The reagents must be returned to storage conditions immediately after use. When properly stored, the reagents are stable to the date indicated on the label.

RESULTS

Fungi: Black

P. Carinii: Black Mucin:

Gray

MyceliAnya (inner): Gray to Black Hyphae (inner): Gray to Black Background: Light

Green

Intended for *in-vitro* use by laboratory professionals. Each kit will stain approximately 50 slides.

SPECIMEN PREPARATION

Appropriately fixed, paraffin-embedded, 3-5µm tissue section.

CONTROL TISSUE

Any fungus-infected tissue

DILUTION AND MIXING

Most of the solutions in the kit are ready-to-use. The on-rack mixing feature on the Quantum S2 Slide Stainer will mix the

LIMITATIONS AND PRECAUTIONS

For use by laboratory professionals. See SDS for complete warnings, precautions, hazard and precautionary statements, and disposal information. Do not use metal forceps, racks, or tools with the silver solution.

Do not use if reagents become cloudy. Do not use past expiration date.



INSTRUCTIONS FOR USE

- Press Prepare Labels to prepare slide labels, and affix labels to slides.
- 2 Place and secure blue staining chambers in respective module lids
- 3 Insert labeled slides on the modules and press Scan Slides.
- 4 Press **Scan Reagents** to display the required reagent names and volumes (number of tests).
- 5 Place GMS Stain Kit vials onto the Reagent Rack and remove caps from vials.
- **6** Use the **clean empty vial in Position 40** for on-rack mixing. Make sure this vial is removed from the stainer after the stain run and is appropriately cleaned after each use.
- 7 Press Scan Reagents to start the staining process.

Use stains and reagents when they are at room temperature. Tissue section should be placed in proper area of the microscope slide for best results. Check the level of bulk deionized water before stain run to ensure proper volumes are used for optimal staining results. Replace

caps on the vials when not using to minimize solution evaporation or other variables. The blue chambers must be cleaned after each use with Quantum Chamber Cleaning Solution for 20-30 minutes followed by a thorough deionized water rinse. Allow to air dry before next use.

Note: The GMS Kit requires a tube cleaning cycle after each use (OS2-SILVER-CLN).

MATERIALS REQUIRED BUT NOT SUPPLIED

- 1 Control tissue (CS-FUNGUS/GMS/25)
- **2** Blue Staining Chambers (QHD-CH200-10)
- **3** Tube Cleaning Kit (For Silver Stains) (QS2-SILVER-CLN)
- **4** Quantum Chamber Cleaning Solution (QHD-QHC-1)

For possible customizations, staining protocol information, or troubleshooting, please contact the Technical Support Department at StatLab by emailing tech@StatLab.com or calling 1-800-442-3573 ext. 106.

STATLAB QUANTUM S2 STAINER

Run more stains with the StatLab Quantum S2 Slide Stainer, a fully- automated slide staining system. This universal system is designed to automate the manual staining methods routinely used in special stains and related applications. Its user-friendly programming and flexible platform allow for easy user interface. The StatLab MasterTech S2 Stain Kits are to be used exclusively on the Quantum S2 Slide Stainer, and no other reagents should be used other than those provided in the kits or specified as they may damage the platform.

REFERENCES

- 1. McManus, J.F.A. and Mowry, R. 1955. Staining Methods and Histologic and Histochemical. Grocott, pp 194-197.
- 2. Koski, J.P. 1981. Silver methenamine-borate (SMB); Cost reduction with technical improvement in silver nitrate-gold chloride impregnation's. Journal of Histotechnology 4:115.
- 3. Procop, G.W. et al. 2004. Detection of Pneumocystis jiroveci in Respiratory Specimens by Four Staining Methods. Journal of Clinical Microbiology. July 2004, Vol. 42, No. 7, pp 3333-3335.
- 4. Raab, S.S. et al. 1994. Utility of Gomori methenamine silver stains in bronchoalveolar lavage specimens. Modern Pathology, June 1994, Vol. 7, No. 5, pp 599-604.
- 5. Sale, G.E. 1978. Rapid Methenamine Silver Stain. Arch Path Lab Med, 1978, 102, pp 351-352.
- 6. Sheehan, D.C., Hrapchak, B.B. 1980. Theory and Practice of Histotechnology, 2nd edition, CV Mosby Company, St. Louis, MO.

