**TITLE: Hematek 3000 System Stainer Use and Maintenance**

**PRINCIPLE:** Hematek stainer is used to stain hematology slides. Hematek stainer requires periodic maintenance to ensure proper function. The system produces stained glass slides of consistent quality in a continuous process. This is accomplished by having a fixed length of time in each of the three phases of stain, buffer, and rinse as well as predetermined ratio of stain-to-buffer volumes in the buffer phase.

**PERSONNEL:** Medical Technologist

**SPECIMEN:**

Patient Preparation: No special preparation by laboratory personnel necessary.

Type of Specimen: Well mixed blood and body fluids

Handling precautions: Handle all specimens using Standard Precautions

**REAGENTS:**

Hematek Stain Pak – Modified Wright’s Stain

**EQUIPMENT**

Hematek, glass slides, methanol, kimwipes, cotton swab

**CALIBRATION**

No calibration required.

**QUALITY CONTROL**

QC is performed daily on the first slide that has WBC > 2.0. The stain on the first slide of the day is compared to the stain quality on the QC slide. If the slide stain qualities are acceptable document quality of stain in the Daily Maintenance Log in the Heme Daily and Weekly Maintenance Binder. If the slide stain qualities are not comparable then further action is required:

1. Check reagent levels and replace when necessary.
2. Perform a Daily Maintenance if it has not been performed for your shift.
3. Notify Senior Tech if the previous steps have not resolved the stain quality.

**STEPWISE PROCEDURE**

1. Prime the pump tubing.
	1. Prime the pump tubing before staining a glass slide, do not stop priming until tubing is free of air bubbles.
2. Always prime four blanks slides before you stain smeared glass slide. Prime slides may be saved for re-use of prime slides.
3. Load smeared glass slides.
	1. Glass slides must be inserted into the grooves of the spirals so they are parallel to the slides loading lines inscribed on the platen. Load the smeared glass into the grooves with the smeared side facing in the direction of the conveyance and the feathered edge of the smear towards the rear of system.
4. When slides are finished remove processed glass slides from the slide drawer. If glass slides are being processed, do not attempt to remove them from platen allow the glass slides to complete processing by the system.

**Installing the Hematek Stain Pak**

1. Raise the lid
2. Remove the three cannulas from the used stain pak.
3. Lift the used stain pak out of system.
4. Insert new stain pak, with the stain bottle to the right, into system.
5. Make sure carton is all the way down and resting on the tray at the bottom of the pocket.
6. Insert cannulas into respective bottle by puncturing the center of the indentation in the visible corner of the bottle. If cannulas appear damaged or bent replace them, see Hematek System Instruction Manual.
7. Remove the cannula, turn it 1/4 turn, and insert it again into the same puncture to create a slightly larger hole for venting.
8. Prime the pump tubing.
9. Close the lid.
10. Load four priming slides before use.

**Daily Maintenance**

1. Clean exterior surfaces
	1. Wipe the exterior surface with damp kimwipe.
	2. Wipe exterior with kimwipe and methanol to remove stains.
2. Clean stain tube and cannula.
	1. Remove all three cannula from stain pak
	2. Place the stain cannula into container with approximately 5mL of methanol.
	3. Press priming button, when container of methanol is empty and the platen is clean (methanol is no longer in tubing) turn off the priming.
	4. Wipe platen, always wipe right to left to not damage sensing switch fingers, with a kimwipe.
	5. Replace cannulas in appropriate reagents.
	6. Press power switch, the fan and conveyor spirals should stop as well as green power light should switch off.
3. Clean the Platen
	1. Power should be off. Always wipe the platen from right to left.
	2. Wipe the platen with a kimwipe soaked in methanol from right to left.
	3. Thoroughly clean the mixing grooves and the front guide rail.
	4. Turn power on when finished.
4. Clean the Waste Tank
	1. Carefully pull waste tank away from the system. The red waste tank light will go on.
	2. Dispose of the fluid in waste tank through the opening in the corner in the dirty sink.
	3. Rinse the waste tank with water.
	4. Reinstall the waste tank into the system; the red light will go off.

**Weekly Maintenance**

1. Clean the drain troughs and rear guide rail.
	1. Switch system power off.
	2. Raise the lid, remove middle cover.
	3. Wet cotton swab with methanol.
	4. Wipe from right to left the length of the drain troughs and the rear guide rail with cotton swab to remove the entire excess residue.
	5. Replace middle cover back in place, close lid, and turn power on.

**REFERENCES**

Hematek 3000 Systems Instruction Manual, Manual Version 1.3, Date of Issue 2015-01