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<tbody>
<tr>
<td><strong>Title</strong></td>
<td>Operation and maintenance of Sakura Tissue-Tek GLAS automated Coverslipper</td>
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Standard Operating Procedure

1 Introduction
The Tissue-Tek® Glas™ Automated Glass Coverslipper is useful for coverslipping a large quantity of slides.

2 Specimen submission
2.1 Type
Stained slides
2.2 Special requirements for collection - NA
2.3 Handling conditions – NA
2.4 Criteria for rejection of sample
A slide which has air bubbles, fingerprints, tissue on the back, or any type of structural damage is unacceptable. Place slide in xylene until the coverslip falls off and then coverslip the slide according to the procedure below.

3 Materials
3.1 Equipment & Instrumentation
- Tissue-Tek® Glas™ Automated Glass Coverslipper
- Tissue-Tek® compatible slide racks
- Tissue-Tek® receiving racks
3.2 Reagents & Media
- Tissue-Tek®Glas™ 6419 Mounting Medium
- Xylene
3.3 Supplies
- Cover glass (24X50-1)

4 Safety Management
4.1 Required Safety Training:
- Chemical fume hood operation
- SDS / Hazard Communication
4.2 Required personal protective equipment (PPE):
Minimum: Lab coat, Safety glasses and closed toe shoes – upon entry of lab
Gloves: Nitrile
- Chemical resistant – when immersing fingers in Xylene
4.3 Hazard Communication
A. Chemical: See SDS
   - Tissue-Tel Glas Mounting Medium (SDS-824)
     - Flammable! Product is harmful if swallowed. Contact may cause irritation.
   - Xylene (SDS-574)
Wisconsin Veterinary Diagnostic Laboratory
Standard Operating Procedure

- Flammable liquid and vapor. Possible cancer hazard. May cause cancer based on animal data. Harmful if absorbed through skin or if inhaled. Causes eye, skin, and respiratory tract irritation. Inhalation may cause central nervous system effects. Aspiration hazard if swallowed - can enter lungs and cause damage.

B. Biological: □ Biosafety Level 2
C. Physical: N/A
D. Electrical: N/A
E. Sharps: N/A
F. Ergonomics: N/A
G. Other: N/A

4.4 Waste Disposal
- Xylene can be discarded in a designated waste xylene carboy and recycled using the in-house xylene recycler.
- Waste xylene must be dumped into a designated waste carboy. Document the type and amount of each solution on the Chemical Inventory Analysis For Waste Solvents In Carboys. Once the carboy is full, transport the carboy with the completed documentation to room 1101 for safe storage until it can be picked up by UW-Safety.
- All broken glassware and/or slides are disposed in the broken glass box located in Room 1124.

5 Preparation for procedure
5.1 Equipment and instrumentation preparation
- Turn instrument on by firmly pressing the power switch to the “I” position.
- Perform the daily preventative maintenance activities and document on the maintenance log.
- Remove the holder and carefully replenish the coverglass into the holder as needed. Each coverslip holder will hold 200 sheets of coverglass
- Place all 3 receiving racks onto the rack guide rails if not already positioned.

5.2 Reagents and media preparation
- Inspect mounting medium bottle. Make sure that the level of mounting medium is at least 2 cm or higher from the bottom of the bottle.

5.3 Standards/controls preparation - NA
5.4 Specimen preparation
- Slides must remain in xylene until coverslipped.

6 Performance of procedure
6.1 Coverslip Slides
1. Position slide baskets in the loading drawer, set the basket into the drawer with the “UPSIDE” marking on the slide basket directed toward the front of the instrument.
2. Be careful to move the slide basket hook toward the left of the instrument so that it avoids contact with the slide glass arm as slides are retrieved from the loading drawer.

3. Slide the loading drawer back into the instrument, enough so that it does not come in contact with the door and gently close the door.

4. From the Standby mode, press [START] to begin operation.

5. After the "<RUN COMPLETED>" message appears, open the cover and carefully remove the receiving racks from the instrument.

6. Slightly angle the racks toward the left to prevent any slides from accidentally sliding out of the rack.

7. The instrument will return to the Standby mode and is again ready to begin operation.

6.2 Daily Maintenance

- Internal components shall be inspected and cleaned as needed.
- Replace xylene in nozzle reservoir.
- Clean SG and CG vacuum cup with alcohol moistened Kim-wipe.
- Clean mounting media nozzle with xylene moistened Kim-wipe.
- Remove plastic mounting media waste tray and soak in xylene.
- Replace the clean plastic mounting media waste tray in its housing.
- Inspect receiving basket. Soak in xylene overnight if debris has accumulated.
- Check that lubrication bottle is filled.
- Clean slide conveyor mechanism with xylene moistened Kim-wipe.
- Check xylene level in loading drawer. Top-off with pristine xylene if level is low. Replace if debris is evident.
- Document maintenance on Sakura GLAS Coverslip Maintenance Log.

6.3 Maintenance – Every 6 months

- Clean the instrument strainer of debris.
- Empty and clean the loading drawer. Replenish with pristine xylene.
- Soak receiving racks in xylene overnight and allow to dry before use. Remove and replace xylene in the lubrication bottle.
- Document maintenance on Sakura GLAS Coverslip Maintenance Log.

6.4 Maintenance – Annual

- Inspect SG and CG vacuum cups and the plastic blade on the waste tray and replace as necessary.
- Document maintenance on Sakura GLAS Coverslip Maintenance Log.

7 Interpretation of results - NA

8 Report of results - NA

9 Procedure notes

9.1 Details and helpful hints

- If a malfunction occurs that necessitates stopping the normal operation, press the [EMER. STOP] key to stop all operations immediately. Refer to
the operating manual for assistance with problem resolution and a troubleshooting chart.

- If the [EMER. STOP] key has been pressed, it is necessary to remove all slides from the coverslipping stage. Any coverglass form the coverglass arm must be removed and all receiving racks must be emptied and placed back into the guide rails before coverslipping can resume.

9.2 Limitations of procedure
1. Each Sakura slide rack can hold up to 20 slides.

10 References
1. Tissue-Tek® Glasm™ Auto Glass Coverslipper Operating Manual (MAN-P-38)

11 Summary of Current Revisions
1. Changed indirect wording:
   a. 2.2.4 A slide which has . . . is unacceptable
   b. 6.6.2 Internal components shall . . .
2. Section 4: Updated Safety section.

12 Supplemental Information
12.1 Quick Procedure Reference - NA
12.2 Flow Diagram - NA
12.3 Manufacturer’s Information
   Sakura Finetek USA, Inc.
   1-800-725-8723