I'm not a bot

Hematek 3000 system instruction manual

Hematek 3000 system pdf. Hematek 3000 manual. Hematek 3000 service manual. Hematek 3000 user manual pdf. Hematek 3000 user manual.

General Safety Information - Operator Qualification Safe Handling of Glass Slides and Consumables - Signal Words in Safety Messages - Structure of Safety Messages Symbols on the Slide Stainer and Consumables - Statutory Requirements Obligations of the System Owner - Unpacking and Checking the Delivery Fluid Delivery Components - Slide Transport Components - Consumables and Spare Parts Hematek Stain Pak - Modified Wright's Stain - Hematek Stain Pak - Wright-Giemsa Stain - Hematek Underplaten Tubing Set Priming the Pump Tubing - Preparing Priming Slides - Loading Smeared Glass Slides Switching off the System - Cleaning the Exterior Surfaces - Cleaning the Stain Tube and Cannula Cleaning the Waste Tank - Cleaning the Drain Troughs and the Rear Guide Rail - Performing Maintenance Installing the Hematek Stain Pak - Replacing the Pump Tubing - Removing the Pump Tubing Installing the Pump Tubbing - Replacing the Underplaten Tubing - Removing the Underplaten Tubing Installing the Underplaten Tubing - Checking the Adjustment of the Sensing Switch Fingers - Adjusting the Sensing Switch Fingers Adjusting the Pump Volumes - Checking the Staining Process - Correcting the Pump Volumes Verifying the Pump Volumes - Recorded Volumes Fall Within Specified Ranges - Recorded Volumes Do Not Fall Within Specified Ranges Replacing the Line Fuses - Hematek 3000 System - Instruction Manual - Version 1.3 TOC - Principle of Operation - Example for the Calculation of the Stain-To-Buffer Ratio Technical Specifications - Hematek 3000 System - Instruction Manual - Version 100 Addendum to the Instruction Manual - Page 2 If the Hematek system is used in a manner not specified by Siemens, the protection provided by the equipment may be impaired. See warning and hazard statements. Contents: Section 1: Introduction - General Description and Intended Use - Theory of Operation - Physical Characteristics Circular Bubble Level - Levelers - Slide Transport System - Conveyor Spirals - Platen Slide Drying System - Slide Drawer - Waste Tank - Staining System General Guidelines for Optimal Staining - Operating Procedures - Start the Instrument - Prime the Tubing Load the Blood Smear Slides - Stain the Smears - Clean the Tubing after Use - Turn the Instrument Off at the End of the Day Stain Pak Replacement - Section 4: Specimens - Siemens Offices Worldwide Returning the Instrument for Repair, Exchange, Replacement, or Loaner - Supplies and Replacement Parts Hematek Stain Pak – Modified Wright’s Stain - Hematek Stain Pak – Modified Wright-Giemsa Stain - Hematek Cannula Set Hematek Pump Tube Set... The Hematek Slide Stainer uses a Stain Pak for optimal results, which consists of stain, buffer, and rinse solutions in separate bottles. The stainer works by having a fixed time for each phase: stain, buffer, and rinse, with a predetermined ratio of stain-to-buffer volumes in the buffer phase. This process produces stained slides of consistent quality. The physical characteristics of the Hematek Slide Stainer include a circular bubble level and leveling feet for stability. It features a slide transport system consisting of conveyor spirals, a platen that spans the entire front of the instrument, and a slide drawer. The platen has elevated guide rails to support slides as they move along it and is precision-machined from high-performance plastic polymer material. The staining system involves volume control, pump assemblies, and cannulas for controlled measurement and staining. It's crucial to use the Hematek Pump Tube Set exclusively with the Slide Stainer. The sensing switches above the platen activate specific pumping motors after a time delay when contacted by a slide in position. The electrical system includes components such as the operating lever, power light, low stain light, and other control elements for instrument operation. usual operating conditions are LOW STAIN POWER; however, when the Hematek Stain Pak contains enough reagents for about 20 slides, a weight-sensing device triggers the circuit, illuminating the light and indicating it's time to replace the Stain Pak. The fuse holder, located in the center of the panel, holds a spare fuse that protects against electrical overload. The ON/OFF switch, at the bottom of the panel, controls all power to the instrument. When disposing of Hematek Slide Stainer wastes, classify them as hazardous or biohazardous and comply with applicable laws and regulations. Read this Operator’s Guide carefully before operating the instrument; follow instructions closely, as it is a precision device that must be handled accordingly. Rough handling can damage internal components. Before unpacking, inspect the shipping carton for visible signs of damage. Unpacking involves removing the Hematek instrument and supplies from the carton and adjusting the feet to level the instrument. Ensure slides are positioned in opposing slots, parallel to inscribed lines on the platen, before allowing them to automatically feed onto the platen. Operating the instrument requires activating each sensing switch finger as slides move down the platen; extend new tubing to pumps, thread it into holes in pump arms, and connect it securely to recessed nipples on the circuit board housing. When installing the Stain Pak, remove perforated tabs, insert the carton with the bottle to the right into the well at the rear of the instrument, ensuring it's all the way down before proceeding. 1. To prepare the Hematek Slide Stainer, follow these steps: * Place a new cannula into the well at the bottom of the tray. * Remove the cannula, turn it 1/4 turn, and insert it again into the same puncture to create a slightly larger hole for venting. * If additional venting is desired, make a second hole in the top of the bottle near the indentation. 2. Start the instrument by turning the power on. A yellow light will illuminate when the Hematek Stain Pak contains sufficient reagents to stain about 20 slides, indicating the need for replacement. 3. Prime the tubing by lifting the stainer-operating lever and holding it in that position until the stain, buffer, and rinse reagents flow evenly through their tubes without any air bubbles. 4. To load the blood smear slides: * Wear personal protective equipment and use universal precautions when working with biohazardous materials. * Prime the platen with reagents to ensure optimal results on the specimen slides. * Load the patient slides into the grooves of the conveyor spirals with the blood smear side facing to the left of the operator. 5. If the light illuminates when the instrument is first turned on or while slides are being processed, a new Hematek Stain Pak is needed. Follow these steps to replace it: * After replacement, prime the instrument to remove any air bubbles that may be present. 6. The Hematek Slide Stainer is designed specifically for automatic staining of peripheral blood smears prepared on standard 25 mm x 75 mm or 1” x 3” glass slides. 7. When preparing the smear: * Use the “squash” technique to avoid extending beyond the platen surface and contact with the staining reagents. * Do not allow the smear to touch the edges of the slide as large cells tend to accumulate there. The Hematek Slide Stainer, a precision instrument for trouble-free operation with minimal maintenance, requires proper cleaning to ensure optimal performance. According to the user manual (Section 5: Maintenance), page 5—1 to 5—15, regular cleaning is crucial to prevent clogging and bacterial growth. BIOHAZARD precautions must be taken when working with biohazardous materials. To prime the instrument, wipe the platen with a soft cloth from right to left only (Figure 5-1). Using the prime function, purge the stain from the tubing by placing it in methanol and pumping until clear solution appears. Empty the waste tank daily and after installing a new Stain Pak, taking care not to spill contents. For more extensive cleaning, loosen the thumbscrews on the circuit board cover (Figure 5-4), raise it to expose the troughs, and flood with methanol to loosen precipitated stain. Wipe excess residue from the troughs using an applicator stick with a cotton swab attached. Replace the Hematek Stain Pak carton and follow procedures for minor replacements and adjustments, including fuse replacement, light assembly replacement, pump tubing replacement, underplaten tubing replacement, and pump volume adjustment (Section 6: Minor Replacements and Adjustments). Given article text here To achieve optimal staining results with the Hematek Slide Stainer, it is essential to have a fixed length of time for each phase: stain, buffer, and rinse. Additionally, a predetermined ratio of stain-to-buffer volumes in the buffer phase should be maintained. If starting times for each phase are incorrect, follow the procedure outlined in this section. Proper adjustment of the instrument can typically be determined by observing the amount of stain and buffer required to fill the capillary gap between the slide and the surface of the platen. The volume of stain and buffer should be adjusted accordingly; the volume is lowest when a knob is turned fully counterclockwise and highest when turned fully clockwise. Volume increments are marked on each knob. For optimal staining, the stain-to-buffer ratio should be approximately 1:2 to 1:3, with the volume of buffer being about two to three times that of the stain. Proper mixing of the stain and buffer is also crucial; this can be checked by observing if the buffer pulses from the orifice and moves around the two mixing grooves for complete mixing. Too much stain and/or buffer will reduce the pulsing action, causing inconsistent staining across the slide. To troubleshoot any issues with the Hematek Slide Stainer, refer to the troubleshooting pointers in this section. If you are experiencing problems or have questions concerning the instrument's operation or maintenance, contact your local technical support provider or distributor for assistance. Only use Hematek Stain Paks with the Hematek Slide Stainer; do not use any other stain solution. Common issues that can be resolved include: - Clogged cannula openings: Remove the cannulas from the solution and clean away debris with a cloth and alcohol. - Pump tubing that is collapsed or perforated: Replace the pump tubing. Refer to page 6-7 for detailed instructions on replacement of the pump tubing. - Slides of variable thickness: This can be addressed by ensuring proper stain-to-buffer ratio and volume adjustments. - Pale staining: Check if the volume and ratio have been properly set; refer to Volume and Ratio section for guidance. For any additional assistance or technical support, please contact your local distributor. Determination on page 6-17 is not met due to high stain volume Refer to Pump Volume too high Adjustment on page 6-14 may decrease stain intensity if increased Rinse volume is too high, affecting results on pages 81 and 82 Proper operation and cleaning procedures must be followed to avoid problems in Section 7: Troubleshooting If issues arise, contact Siemens Offices Worldwide or a local technical support provider for assistance Return the Hematek Slide Stainer to your local distributor within 15 days if defective, or face replacement costs Use only Hematek brand supplies to achieve optimal results with the Hematek Slide Stainer The Hematek Stain Pak contains a specially prepared stain and buffer solutions The Underplaten Tubing set is available for periodic replacement Refer to Appendix A: List of Symbols for product information and proper usage guidelines. Various system components are listed across multiple pages with specifications for their use, maintenance, and replacement. The Hematek 3000 System is a slide staining device that builds on over half a century of experience in this field. Introduced to laboratories in 1956 as the first Hematek System, it now features easy load-and-go operation with an all-in-one stain pack that can produce up to 900 slides. The system includes pumps for precise reagent delivery and a platen for uniform staining. It also has a self-contained waste drawer and alerts users when low on stain or full waste bin.