**Purpose:**

This document describes the procedure for the operation and maintenance of the Helmer, Beckman Coulter, and Hettich Serofuges and centrifuges.

**Procedure:**

|  |  |  |
| --- | --- | --- |
| **Step** | **Action** | **Related Documents** |
| **Operation** | |  |
| ***To operate the EBA 21*** | | |
| 1 | Turn on serofuge by pressing power switch on. The LED panel will light up and when “open” displays, the serofuge is ready. Twist lid lock to the left to open. |  |
| 2 | Load tubes in balanced pattern and twist lid lock to right to secure. Press START to run program displayed or press PROG key to select another program. |  |
| 3 | Audible beep sounds at end of program. |  |
| 4 | To stop during centrifugation, press STOP key twice. |  |
| 5 | To change program use arrow key to scroll through the parameters, the up and down keys to change parameters, and PROG to save. |  |
| ***To operate the EBA 20*** | | |
| 1 | Turn on serofuge by pressing power switch on. The LED panel will light up and when LED stops flashing above the arrow display (the rotation indicator), the serofuge is ready for use. Push the button just to the left of Stop, which is a white key that looks like the lid is open on the serofuge. |  |
| 2 | Load tubes in balanced pattern and press down to secure lid lock with audible click. Press START to run program displayed, or press ▲ or ▼keys to adjust speed (in RPM x 100) and time (t) in minutes. |  |
| 3 | Lid release clicks audibly when program finishes. To stop at any time, press the red stop key. |  |
| ***To operate the EBA 200*** | | |
| 1 | Turn on serofuge by pressing the power switch on. The LED panel will light up. Wait until the panel displays the Unlock symbol  with the Speed Setting, then the centrifuge is ready for tube load |  |
| 2 | Set the desired values for speed setting using the ▲ or ▼ keys for speed (RPM/RCF) and time (t). |  |
| **Step** | **Action** | **Related Documents** |
| ***To operate the EBA 200 (continued)*** | | |
| 3 | Load tubes in a balanced pattern and close the lid by lightly pressing the front edge of the lid to secure lock with audible click. Panel displays the Lid Locked symbol  with the Speed Setting.  **NOTE**: Do not slam the lid close  Press the Start/Pulse key to start centrifuge run |  |
| 4 | Turn on serofuge by pressing the power switch on. The LED panel will light up. Wait until the panel displays the Unlock symbol  with the Speed Setting, then the centrifuge is ready for tube load |  |
| 5 | Set the desired values for speed setting using the ▲ or ▼ keys for speed (RPM/RCF) and time (t). |  |
| 6 | Load tubes in a balanced pattern and close the lid by lightly pressing the front edge of the lid to secure lock with audible click. Panel displays the Lid Locked symbol  with the Speed Setting. Press the Start/Pulse key to start centrifuge run.  **NOTE**: Do not slam the lid closed |  |
| 7 | Take note of the optical and acoustic signals once the centrifugation run ends, while the lid automatically unlocks:   |  |  | | --- | --- | | **If signal is** | **Then** | | Optical | The backlighting of the display flashes  **NOTE**: As the lid opens, the remaining number of running cycles (centrifugation runs) is briefly displayed. | | Acoustic | The centrifuge will beep. Deactivate signal by pressing the Start/Pulse key | |  |
| ***To operate the Stat Spin*** | | |
| 1 | Turn on the Stat Spin by pressing power switch on. The panel will light up with the following press-tabs:   * 2 min * 3 min * 5 min * ►Start (Green Arrow) * Stop (Red Stop sign)   There is a small “wrench” that only lights up when the centrifuge is not balanced, or service is required |  |
| 2 | Load tubes in balanced pattern.   * Close lid and press to latch * Select appropriate time for spinning. * Press Start. * Stat Spin will run for chosen time, then stop. * If stop is required prior to time selected, Press Red Stop Sign. |  |
| **Cleaning and Maintenance** | | |
| **Daily** | Clean regularly, using soap or a mild detergent and a damp cloth to remove residue from detergent if needed. Use only detergents or disinfectants with a pH between 5-8. Dry immediately after cleaning. |  |
| **Step** | **Action** | **Related Documents** |
| **Procedure B: Cleaning and Maintenance (continued)** | | |
| **Semi-Annual** | Calibrate speed and timer. |  |
| **Yearly** | Check centrifuge chamber for damage. Discontinue use of centrifuge if damage is found that is relevant to safety. |  |
| **As Needed** | Rotor head may be removed and cleaned with a mild detergent and rinsed with water. Lightly grease the motor shaft. If needed, lightly rub rubber seal of the chamber with talcum powder or a rubber care product. Check all parts for wear and corrosion.  Leaking or breakage of centrifuge containers: Remove all broken container parts, glass splinters, and leaked centrifugation material. Disinfect if this concerns infectious material   * Suitable disinfectants may have the following ingredients: ethanol, n-propanol, ethyl hexanol, anionic tensides, corrosion inhibitors. * Wipe with damp cloths after using disinfectants. Dry surfaces immediately after disinfecting * Replace rubber inserts and rotor plastic sleeves after glass breakage   Replace rotor when maximum rotor running cycles passed |  |

**References:**

Standards for Blood Banks and Transfusion Services, Current Edition. American Association of Blood Banks, Bethesda, MD.

Serofuge Operators Manual

EBA 20 Operators Manual

EBA 21 Operators Manual

EBA 200 Operators Manual

StatSpin Express 3 Centrifuge IFU