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| **University of Washington,** **Harborview Medical Center****325 9th Ave. Seattle, WA, 98104****Transfusion Services Laboratory****Policies and Procedures Manual** | **Original Effective Date:**March 15th, 2017 | **Number:** **3029-2** |
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| **TITLE: Centrifuge Tach and Time** |

**PURPOSE**

This document describes the procedure to perform tach and time on centrifuges and cell washers at HMC Transfusion Services Laboratory.

**Policy**

HMC TSL and the Scientific Instrument department (SI) will perform tach and time on the all centrifuge equipment used for patient testing. This includes centrifuges and cell washers. Tach and time will be performed on initial installation, every 6 months and post major repair of equipment.

**PROCEDURE**

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| **Step** | **Action** | **Related Documents** |
| 1 | Identify equipment that requires tach and time performed | Appendix ASchedule for Routine Maintenance and QC of Equipment |
| 2 | Materials needed:* Tachometer-NIST calibrated
* Calibrated stopwatch
* Tach and Time Form
 | Centrifuge Tach and Time Form |
| 3 | Apply a piece of reflecting tape to the centrifuge rotor making sure it is visible through the lid. |  |
| 4 | Position the tachometer on centrifuge lid and press the ON/OFF button. The meter defaults to the RPM measurement mode. Point the light source to the reflective tape making sure the vertical angle of the reflecting tape is not greater than 30°.*Note: tachometer may not always work at 900 angles to the reflective tape. Adjustments may be needed for accurate reading.* |  |
| 5 | Start Timer* Centrifuges- start timer when pressing start button
* Cell Washer- start timer when display on centrifuge shows time
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| 6 | Stop Timer* Centrifuge- varies.
* Stat Spin- when brake is applied
* EBA 20, EBA 200- when centrifuge reaches 0
* EBA 21- when red stop button on centrifuge lights up
* Cell washer- when count on display reaches 00:00
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| 7 | Tach:* Tach reading may fluctuate between start and end of spin. Average the tach reading
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| 8 | Record results * Write Equipment name, SI number and Location. Example: EBA 21, SI 28333, Bench A.
* Indicate RPM and time
* Indicate Tachometer model and Serial Number
 | Centrifuge Tach and Time FormAppendix A |
| 9 | Do this a total of 3 times per centrifuge program and record results.Enter tech ID and date  | Centrifuge Tach and Time Form |
| 10 | Press and hold ON/OFF button to power off the tachometer. |  |
| 11 | Results Review* Results must be within ± 5% for acceptability
* Review will be performed by TSL Manager or designee
 | Appendix A  |
| 12 | If results are unacceptable, * Place equipment out of service
* Contact Scientific Instruments (SI)
* Fill out a QIM
* Notify to staff with shift hand off
 | Removing Equipment from ServiceEquipment out of ServiceQuality Improvement Monitoring Form (QIM) |

**Appendix A**

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| **Centrifuge** | **6 Month RPM and time performed by:** | **RPM and Time** | **Acceptability Range** |
| Helmer Ultra CW | HMC TSL | 2900/ 20sec, 60 sec | 2755-3045 |
| EBA 21 | SI | 3400/60 sec | 3230-3570 |
| Stat Spin Express 3 | HMC TSL | 7200/ 2 mins, 3mins | 6840-7560 |
| Stat Spin Express 3 | HMC TSL | 5600/ 5 mins | 5320-5880 |
| EBA 20 | SI | 3500/ 5 mins | 3325-3675 |
| EBA 20 | SI | 5200/ 2 mins | 4940-5460 |
| EBA 200 | SI | 3000/ 5 mins | 2850-3150 |
| EBA 200 | SI | 4600/ 2 mins | 4370-4830 |
| EBA 200 | SI | 5200/ 60 sec | 4940-5460 |

**References**

AABB Technical Manual, Current Edition.

Ultra CW manufacturers manual

EBA 21 manufacturers manual

EBA 20 manufacturers manual

EBA 200 manufacturers manual

StatSpin Express 3 manufacturers manual

EXTECH RPM33 Tachometers Manual