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Kaiser Permanente Medical Center, San Francisco
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Work Instruction

Title: TC Specimen Centrifuge		**WI Number** SFOWI-0041 **Revision:** 8
Department: Immunohematology **Area:** 2425 Geary Blvd SFO Hospital Lab	***Document is in the Final Approval Process. 2 - approvals are required***	
Type of Document: Work Instruction		**Review Period -** 340 **Days**

PURPOSE

This centrifuge is used to separate red cell-plasma of blood bank samples only. This centrifuge utilizes the principle of high-speed rotation to create a suitable centrifugal force to yield separation of a blood sample. This centrifuge should remained at 4000 rpm and spun for 5 minutes to achieve good separation.

SCOPE

The centrifuge will be used by all Transfusion Service Staff to prepare blood samples for testing.

REAGENTS

Not applicable

EQUIPMENT

Hettich Rotofix 32 Centrifuge

PROCEDURE

A. Centrifuge Operation
   1. Loading the rotor
      a. All rotor positions must be lined with identical hangers.
      b. The rotors may only be loaded symmetrically.
      c. Always fill the centrifuge containers outside of the centrifuge.
      d. A consistent fill level in the containers is to be heeded.
      e. The weight specified on the rotor which is 4 X 100g may not be exceeded.
   2. The control panel is divided into four areas: speed, rotation display, time and keys.
      a. The speed area contains the speed display which should be 40 (RPM X 100). The speed can be changed by using the up and down arrows on the display.
      b. The rotation area contains the rotation display which illuminates and rotates anti-clockwise while the rotor is turning. When the

□ symbol lights up, the rotor is stationary and the lid can be opened.

c. The time area contains the running time display which should be a minimum of 5 minutes**.** If needed, the time can be adjusted with the ↑ arrow to increase it up to 10 minutes .

d. The keypad area of the control panel shows the **START** key which is used to start the centrifuge with the preselected parameters, the **STOP** key which allows the centrifuge run to be stopped at any time.

e. The brake adjustment is set to "1" which is the normal braking effect.

3. Start centrifuging run

a. Place the lid and swing handle rail on the lid downward. If the "_" symbol lights up in the rotation display, the lid has been correctly loaded.

b. Start the centrifuge by pressing the START key.

c. Once the rotor has come to a stop, the lid lock is triggered and the display flashes. The lid can now be opened.

d. Swing handle rail on the lid upwards and open the lid. The "L" symbol appears.

e. The lid can only be opened when the centrifuge is switched on and the rotor is stationary.

B. Maintenance and servicing

1. Centrifuge

a. The centrifuge should be cleaned regularly for reasons of hygiene, and if necessary should be cleaned with soap or a mild cleaning agent. Cleaning agents and disinfectants in the pH range 5-8 are to be utilized.

b. In the event of water formation, dry the centrifugal chamber by wiping out with an absorbent cloth.

c. If infectious materials penetrates into the chamber, this is to be disinfected immediately.

d. Lightly grease the rubber seal of the chamber with lubricant after every cleaning.

2. Rotors and Attachments

a. Rotors and accessory parts must be cleaned as needed with a mild cleaning agent and water to prevent corrosion and changes of material.

b. The rotors and accessory parts must be dried immediately after cleaning.

c. Rotors, container and hanger are to be lightly greased with lubricant after drying.

d. Rotor and accessory parts are checked for corrosion. If there is indication of wear and tear or corrosion, notify the supervisor immediately and place the centrifuge out of service.

3. Bi-annual maintenance (performed quarterly by BioMed Engineer)

a. BioMed engineer will check electrical wiring and perform RPM and timer checks. The RPM readings should be 4000±20 (3980-4020). The timer should be ± 1% of the previous reading.

b. BioMed engineer will clean and lubricate trunnions as necessary.

PROCEDURE NOTE(S)

Consult the Hettich Centrifuge Rotofix 32 Operating Instructions Manual for troubleshooting instructions.

REFERENCE(S)

A. Hettich Centrifuge Rotofix 32 Operating Instructions Manual, Tuttingen, Germany.

B. AABB Technical Manual, current edition, Bethesda, MD.
C. AABB, Standards for Blood Banks & Transfusion Services, current edition, Bethesda, MD.

Associated Documents:

External Documents

Associated Quality System Documents - None

Documents Generated:

Check As Applicable (X or NA)	Format History	New Format Requirements
	A document created before September 1, 2005 was written before the new document format template and electronic approving process were implemented. Documents were copied from another document database and pasted on the QSI Quality Management System in order to be included in the Kaiser Permanente San Francisco Laboratory electronic document control database.	This document will be re-written to conform to the new Kaiser Permanente San Francisco Laboratory document format template whenever this document is revised.
Comments:	Documents created after QSI implementation have been directly entered in the QSI environment.	

Document Revision History:

Revision: 8	Date Created: 09/12/2005 Date of Last Revision: 02/25/2019	Last Approval Date: 06/20/2016

Document Author:	Document Manager:
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Reason for Change:

Revision:	Sec/Para Changed	Change Made:	Date
1	N/A	Initial Issue of Document	
2	Aprover	New Lab Director	1/7/07
3	Approver	New Lab Director	7/29/07
4	Approver	New Lab Director	6/1/11
5	Approver	New Lab Director	1/28/13
6	Approver Procedure B.3.	New BB Medical Director. Added '(performed quarterly by Biomedical Engineer)'.	8/8/13
7	Approver	New CLIA Director.	6/16/16
8	Whole document Procedure B.3.b.	Changed RPM to 4000 and centrifuge time to 5 minutes. Verified on 1/23/19. Added clean and lubricate trunnions as necessary by BioMed engineer as per current practice.  Rotofix 32 PM record_changed RPM and time_1-23-1	2/25/19

Notification List:

Approvals:

First Approver's Signature

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Document History Section