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INSTRUMENT STANDARD OPERATING PROCEDURE MANUAL

College of Medicine

SAFETY AND LABORATORY COOMMITTEE, C.O.M, K.F.U.

Prepared by

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Revision Number	**Approved by**		
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Document History

Document Section	Details of Amendments	Date	Modified by (Initials)
SOP	First Draft on SOP for the operation of Ultracentrifuge Optima MAX-XP		

1.OBJECTIVE:

- The document describes the operation of Ultracentrifuge Optima MAX-XP

2.Description:

The Optima MAX-XP microprocessor-controlled tabletop ultracentrifuge generates high centrifugal forces for a variety of applications. The ultracentrifuge design features a variablefrequency induction drive, thermoelectric temperature control system, self-purging vacuum system, rotor overspeed identification system, user login feature, program memory that contains multiple five-step programs, and a choice of acceleration and deceleration rates. Manual and programmed operations are available from the integrated touchscreen interface.

• In manual operation, you enter the individual run parameters before beginning each run.

• In programmed operation, you can duplicate runs quickly and accurately by selecting previously entered programs and running them again.

3.RESPONSIBILITIES:

- It is the responsibility of designated personnel in the lab to train new staff and students on this procedure and to ensure adherence to this procedure under supervision.
- It is the responsibility of designated personnel (staff or Student) to follow the instructions of this procedure under supervision.
- The head of the physiology department must resolve any problem with the process and difficulties in using this SOP.

4.REFERENCES:

- Ultracentrifuge Optima MAX-XP Instruction Manual, BECKMAN COULTER

5.SAFETY PRECAUTIONS:

- Wear gloves, a lab coat and safety glasses for protection.

6.PROCEDURE FOR OPERATING of Ultracentrifuge Optima MAX-XP

6.1.Turning on the instrument:

Turn the power on for the device.

6.2.Creating a New Program:

1- In the Main screen, press the MENU button.
2- Select Program.
3- Press the NEW PROGRAM button
4- Select a rotor first
5- Select the desired rotor, and press the OK button to accept.
6- Press the NEW STEP button.
7- Enter the speed on the keypad display, and press the OK button to accept.
8- Enter the run time on the keypad display, and press the OK button to accept.
9- Enter the temperature on the keypad display, and press the OK button to accept.
10- Repeat Steps 6–9 to enter the parameters for up to five steps for a complete run.
11- To change the acceleration/deceleration rates, press either the ACCEL or DECEL button.
12- Select the desired rates by touching the corresponding numbers.

13- Press the OK button to accept.
14- Press the OK button to accept.
15- Type the name of the program using the keypad just as you would a keyboard.
16- press the OK button to accept.
17- Repeat this procedure to add and save additional programs.

6.3.Starting a Programmed Run:

1- In the Main screen, press the MENU button.
2- Select Program
3- Select the name of the program you want to run, and press the OK button.
4- Press the START button.
5- To terminate a run for any reason, press the STOP button
6- To exit from program mode:
   a. Press the MENU button in the Main screen.
   b. In the Select Program screen, select No Program Selected.
   c. Press OK.
   • The Main screen returns to view so that you can enter parameters manually.
   d. Alternatively, you can try changing a parameter such as speed, time, or temperature.
   • A message appears asking you to confirm that you want to exit from program mode.

6.4.Turning off the Instrument:

- Turn the power off for the device.

6.5.Warning:

All patients specimens should be considered potentially infectious and must be handled with precautions used for human blood