#### PROCEDURE FOR OPERATING THE AIRFUGE ULTRACENTRIFUGE

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| **Purpose**  | The purpose of this procedure is to clarify grossly lipemic serum samples by flotation of the chylomicrons.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Scope****Policy** | This section will provide the operator a detailed instruction on how to operate the Airfuge Ultracentrifuge\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_In order to process lipemic samples, CLS’s must use the Airfuge Ultracentrifuge prior to testing. |
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| **Materials and Supplies** | Equipment:* Airfuge

 Supplies: * Rotor stand
* Base
* Disposable liner, 3.5 ml
* lid
* pipette
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| Safety or Special Safety Precautions  | All laboratory employees are expected to maintain a safe working environment and an injury-free workplace. Laboratory employees are responsible for their own safety and the safety of others and adhering to all departmental and medical center safety policies and procedures.* For standard precautions and safety practices in the laboratory; see LGM 8000, specifically, but not limited to, equipment safety, proper body mechanics, sharps exposure and proper use of personal protective equipment (PPE).
* For Universal Body Substance precautions, see LGM 8005, specifically, but not limited to, exposure to body fluids.
* For proper hand washing, see LGM 8010, specifically, not limited to, proper hand washing.
* For proper infection control, see LGM 8004, specifically, but not limited to, proper use of gloves.
* For proper handling of regular and infectious waste, see LGM 8006, specifically, but not limited to, proper disposal of regular and biohazardous waste.
* For proper cleaning of work area, see LGM 8007 – Cleaning Work Areas.
* For proper handling of chemicals and reagents, see the Chemical Hygiene Plan.
* For proper storage and disposal of chemical hazardous waste, see LGM 8012.

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| Procedure  | **Follow the steps below for sample preparation**

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| **Step** | **Action** |
| 1 | Place the rotor base in the stand. |
| 2 | Install the liner in the cavity of the base. Press the liner down firmly into the cavity. |
| 3 | Insert a loaded pipette into the outer chamber of the liner. |
| 4 | Fill the outer chamber until sample just overflows into the inner chamber. |
| 5 | Screw the lid onto the rotor base. |
| 6 | Fill the inner chamber until sample just touches the inside of the top of the dome. *Do not overfill the liner, or sample will splash out and create aerosols during centrifugation.* |

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| **Follow these steps to operate the ultracentrifuge:**

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| **Step** | **Action** |
| 1 | Turn on the switch which is located behind the instrument. |
| 2 | Load the rotor with samples on the stator pad. |
| 3 | Set the time dial between 10 to 15 minutes (2-3 notches) to obtain a clear sample.***Note:*** *One notch on the dial is equivalent to 5 minutes.* |
| 4 | Close the instrument door and, while pushing down, slowly turn the pressure regulator knob **clockwise** until the air pressure comes to an operating speed between 20-30 psi.***Caution:*** *The air pressure should not exceed 30psi.* |
| 5 | When the rotor stops, slowly turn the pressure knob **counterclockwise** until the pressure reading on the instrument is zero. |
| 6 | Open the door, remove the rotor, and place it in the stand. |
| 7 | Pipette the chylous material from the inner chamber while the lid is in place. |
| 8 | Unscrew the rotor lid. |
| 9 | Use a new pipette to extract the clarified serum from the outer chamber. Be careful not to mix any fatty material left on the wall of the inner chamber with the clarified serum. |

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**Non-**

**Controlled**

**Documents** The non-controlled documents are as follows:

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| **Document No.** | **Document Name** |
|  | Beckman Instruments, Inc., Spinco Division, Palo Alto, Ca. |
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Reviewed and approved by:

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Document History Page

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