

**TITLE: Operation of the Thermo Scientific Revco Laboratory Refrigerator**

SOP Number: \_\_\_\_\_ D-GLO-EQP-001 \_\_\_\_\_

Revision Number: \_\_\_\_\_ 0 \_\_\_\_\_

Effective Date: \_\_\_\_\_ 8 Aug 2015 \_\_\_\_\_

Author: \_\_\_\_\_

Date: \_\_\_\_\_

Reviewer: \_\_\_\_\_

Date: \_\_\_\_\_

QA Approval: \_\_\_\_\_

Date: \_\_\_\_\_

**A. OBJECTIVE**

This document describes the operation of the Thermo Scientific Revco Laboratory Refrigerator in The University of Iowa Dezii Translational Vision Research Group (DTVR).

**B. APPLICABILITY**

This document applies to all personnel at DTVR.

**C. PROCEDURE**

**1.1 Setup**

**1.1.1 Installation**

- Install the unit in a level area free from vibration with a minimum of six inches of space on the sides and rear and twelve inches at the top. Allow enough clearance so that the lid can swing open at least 90 degrees.
- Ensure the equipment is not positioned in direct sunlight or near heating diffusers, radiators, or other sources of heat. The ambient temperature range at the location must be 59 to 90°F (15 to 32C).
- Connect the equipment to the correct power supply of 115V.

**1.2 Operations**

**1.2.1 Start Up**

1.2.1.1 To start up the freezer, complete the following steps:

- Plug in the power cord.
- Insert the key in the switch and turn the power on.
- Rotate the power switch to the ALARM ON position when the temperature drops below the warm alarm setpoint.
- Allow the unit to reach operating temperature before loading it with any product. To stabilize the temperature profile, a 24-hour waiting period is recommended.
- After the unit has pulled down to the desired operating temperature, turn the three position key switch one turn further clockwise to the Alarm On position.

**1.2.2 Product Loading Guidelines**

**TITLE: Operation of the Thermo Scientific Revco Laboratory Refrigerator**

SOP Number:           D-GLO-EQP-001          

Revision Number:                           0                          

Effective Date:                   8 Aug 2015                  

---

1.2.2.1 When loading the refrigerator, take care to observe the following guidelines:

- Never load the refrigerator beyond capacity.
- Distribute the load as evenly as possible. Temperature uniformity depends on air circulation, which could be impeded if drawers are overfilled, particularly at the top of the cabinet.
- For critical applications, be sure that the alarm systems are working and active before you load any product.

**1.3 Troubleshooting**

**1.3.1 Power Supply**

1.3.1.1 Unit does not operate or Power Failure Indicator is on:

- Check that the cord is securely plugged in.
- Plug another appliance into the outlet to see if it is live.
- If the outlet is dead, check the circuit breaker or fuses.

**1.3.2 Cold Control**

1.3.2.1 If the temperature fluctuates, make sure that the cold control is set correctly.

**1.3.3 Condenser**

1.3.3.1 Make sure the condenser is clean. To clean the condenser:

- Disconnect the power
- Remove the top front grill.
- Use a vacuum cleaner with hose and brush attachments to clean the front face of the finned surface.
- Clean up any loose dust and replace the front grill.
- Reconnect the power.

**1.3.4 Compressor**

1.3.4.1 If the unit warms up, check the compressor for the following:

- If the compressor is not running, check if the unit has a power failure alarm. If the power failure alarm light is on, have an electrician check for proper voltage to the unit.
- If the compressor is running, open the door and look through the slotted air intake in the bottom of the evaporator cover to see if icing is present on the evaporator. If icing is present and there is no air flow behind evaporator, call technical service for assistance. The evaporator fans may be inoperative.

**TITLE: Operation of the Thermo Scientific Revco Laboratory Refrigerator**

SOP Number:           D-GLO-EQP-001          

Revision Number:                           0                          

Effective Date:                   8 Aug 2015                  

- If the compressor is running and there is air flow behind the evaporator, contact an authorized service provider or call the technical support hot line for assistance.

1.3.5 Miscellaneous

1.3.5.1 If unit warms up check the following:

- Make sure the door is completely closed
- If warm product was recently loaded in unit, allow ample time to recover from loading warm product.

1.3.6 Defrost Procedures

- The defrosting process on all models is primarily accomplished by air circulated during off-cycle periods.
- Under normal conditions, the temperature warm-up during defrost is virtually unnoticeable. However, an occasional 2°C warm-up is possible if usage is heavy and ambient conditions are extreme.

**1.4 Alarms**

- 1.4.1 The alarm system is designed to provide and audio signals for both power failure and rise in temperature. The alarm is equipped with a battery backup.
- 1.4.2 The alarm is activated when the freezer is operating and the key switch is turned to the Alarm On position. The audible warning signal sounds when there is a power failure or temperature alarm condition, or when the door is ajar for more than 2 minutes.
- 1.4.3 The Mute function (pressing the Scan button) allows you to turn off the audio warning without turning off the visual indicators.
- 1.4.4 To turn off the reset flashing visual alarms, press the UP ARROW and DOWN ARROW simultaneously.
- 1.4.5 There is also a ringback function after approximately 6 minutes if any alarm condition remains active.

**1.5 Cleaning**

1.5.1 Cleaning the Drawers / Wire Shelves and Cabinet Interior

To clean the cabinet interior and drawers / wire shelves use a solution of water and a mild detergent. Rinse the drawers or shelves and wipe them dry with a soft cloth.

**D. HISTORY**

Effective Date	Revision	Change
08 Aug 2015	0	Original document