# CKDu Information and Research Centre

## Standard Operation Procedure

**Centrifuge**

## 1. Introduction

### 1.1. Purpose

To describe a procedure for cleaning and operation of the Centrifuge.

### 1.2. Scope

Applicable to centrifuge located in CKDu Centre.

## 2. Materials

- centrifuge
- centrifuge containers

## 3. Procedures

### 3.1. Basic Operation Procedure

- Inspect the centrifuge to ensure it is working properly, there is no damage, and that the centrifuge is able to move freely.
- Select the appropriate centrifuge tubes or containers, inspect them to make sure there are no cracks or flaws. Discard any tubes/containers that are cracked or flawed.
- Fill tubes with the desired liquid.
    - Never overfill or under fill the tubes or containers (follow the manufacturer's limits).
- Make sure that the centrifuge tubes are balanced, use a balance to ensure that the weights of both tubes match.
    - Do not balance based purely on volume! This is especially true for solutions with different samples or different concentrations of the same sample.
- Tightly secure the lids on the centrifuge tubes.
- Make sure that the outside of the centrifuge tubes are clean and dry before placing them in the centrifuge
- Balance the tubes within the centrifuge.
    - Pictures of properly balanced centrifuges are shown above tubes should be weighted to ensure that they balance properly.
- Close the lid. Make sure the lid has a tight fit.
- Set the run speed and run time. (Never use the rotor's maximum run speed).
- Do not leave the centrifuge until it is operating at full speed and the machine seems to be running smoothly. Ensure that there is no abnormal noise or vibration.
- If you notice an unusual noise or vigorous shaking, immediately turn the centrifuge off and remove it from the power source.
    - Typically, this is caused by the centrifuge not being balanced properly. If the problem does not resolve and the centrifuge is balanced properly, most likely the centrifuge is broken, do not use the centrifuge until it is fixed.
- Once the centrifuge has completed its run, allow the centrifuge to stop its rotation before opening the lid. Never open the lid or touch the centrifuge before it has stopped its rotation. NEVER TRY TO HASTEN THE STOPPING PROCESS! Stopping the machine prematurely can led to injury and mechanical failure.
- Preferably do not open the lid for at least 10 minutes after the rotation has stopped to allow the aerosols that were released during centrifugation to settle.
    - If centrifuging hazardous materials use the centrifuge in a fume hood or glovebox.
    - If centrifuging biosafety level 2 materials the centrifuge must be used in a biosafety cabinet or rotors must have aerosol containment.
    - If centrifuging radioactive materials, use the appropriate shielding during this process.
- After the centrifuge has completely stopped moving, you may remove your samples from the centrifuge