# Safe job analysis – Centrifuge

**Unit**: Department of Chemistry/NAFUMA

**Working tasks**: Using Allegra X-22R centrifuge.

**Date: 11/11-2010,** Jayakumar Karthikeyan

|  |  |  |
| --- | --- | --- |
| Task | What can go wrong | What can minimize the risk |
| Select rotors and accessories | The program will not run properly. | Use only the Beckman Coulter rotors and accessories designed for use in this centrifuge. |
| Checking your samples | **1**.This centrifuge is not designed for use with materilas capable of developing flammable or explosive vapors. So flammable materials have a risk of fire.  **2**.The spining rotor makes a big noise | **1**. Do not centrifuge such materilas (chloroform or ethyl alcohol for example) in this instrument nor handle or store them within the 30-cm clearance envelope surrounding the centrifuge.  **2**.Make sure that filled containers are loaded symmetrically into the rotor and that opposing bottles or tubes are filled to the same level with liquid of the same density. The maxium difference is 0.1g. |
| Stop the rotors | The spining rotors may hurt your hand. | Never attempt to slow or stop the rotor by hand. Open the centrifuge door after the rotor stops. |
| Taking out of your samples | If a glass tube breaks inside the chamber bowl, the glass fragments may cut your hand. | Using gloves when operation. Be careful when examining or cleaning the gasket or chamber. |

**Safety Notice for Using of Allegra X-22R Centrifuge**

1. **For safe operation of the equipment , observe the following:**

* Use only the Beckman Coulter rotors and accessories designed for use in this particular centrifuge
* Make sure that filled containers are loaded symmetrically into the rotor and that opposit bottles or tubes are filled to the same level with liquid of the same density. **The maxium difference is 0.1g.**
* Before starting the centrifuge, **make sure** that the rotor tie-down screw is securely fastened.
* **Do not** exceed the maximum rated speed of the rotor in use.
* **NEVER attempt to slow or stop the rotor by hand**.
* **Do not** lift or move the centrifuge while the rotor is turning.
* If a glass tube breaks inside the chamber bowl, **be careful** when examining or cleaning the gasket or chamber, as sharp glass fragments may be embedded in their surfaces or cut your skin.
* **NEVER** attempt to override the door interlock system while the rotor is spinning.
* **Never** bring any flammable substances within the 30-cm area surrounding the centrifuge. Never lean on the centrifuge or place items on the centrifuge while it is operating.
* **Protection: General PPE (lab glasses, lab coat, closed toe shoes).**

1. **Others**

* **Do not** attempt to lift or move the disconnected centrifuge without assistance from another person.
* This centrifuge is not designed for use with materials capable of developing flammable or explosive vapors. **Do not** centrifuge such samples (chloroform or ethyl alcohol for example) in this instrument nor handle or store them within the 30-cm clearance envelope surropunding the centrifuge.

1. **Only authorized persons have access to use the centrifuge.**

**Authorization is provided by Anja Olafsen Sjåstad.**