



Xi'an Jiaotong-Liverpool University

西交利物浦大学

General Operating Procedure for: Glove Box

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Contents

| | |
|-----------------------------|---|
| 1. Purpose | 3 |
| 2. Scope | 3 |
| 3. Procedure..... | 3 |
| Document information: | 5 |

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1. Purpose

The purpose of this SOP is to regulate the operation, usage and maintenance of Glove Box.

2. Scope

This SOP applies to all personnel using and managing Glove Box.

3. Procedure

3.1 Check Nitrogen canister (Room No.436). Make sure the pressure is not lower than 10bar.



3.2 Check the pressure of gas tank as the following picture:



If the pressure of gas tank is lower than 10 bar, contact Yili Cheng or Xiaozhou.



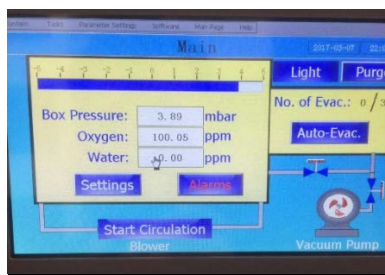
3.3 Turn on the electricity as the following picture shows:

3.4 Find the control panel in the front of transition capsule (touch-sensitive). Log in the system without password. Press OK.

3.5 Check the oxygen concentration of the glove box. There are two indicators of oxygen concentration. The upper limit of oxygen concentration is 100ppm (If the concentration is above 100, it still shows 100ppm). The upper part shows the actual oxygen concentration such as



If the oxygen concentration is higher than 5ppm, click “Start Circulation” to remove the oxygen. If the oxygen concentration is lower than 5ppm or required concentration, click “Start



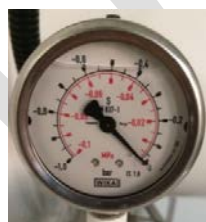
Circulation” to shut off internal recycling.

3.6 Check if the door of transition capsule is closed. Shut the door if it is opened. Open the outer door and put the material on the tray. Shut the outer door after the material is delivered to the inner compartment of glove box. Open vacuum pump.



3.7 The control panel of evacuate shows as the pictures: Rotate the knob clockwise to Evacuate. When the pressure is lower than -1.0 bar, rotate the knob to Close. (When pressure is lower than -1.0 bar, delay the evacuating for several minutes to removing all the O₂). (Notes: The outer door maybe loose when evacuating. Check the outer door and tighten it again.)

3.8 Air inflation. Rotate the knob clockwise to Air inflation. Stop inflating N₂ when the pressure



is about -0.5 bar.

3.9 Repeat step 5 (evacuate) and 6 (Air inflation) at least twice.

3.10 Check the pressure of transition capsule and make sure the pressure is 0.

3.11 Wear latex (or cotton) gloves and lab clothes. (No jewelry is permitted to wear in case of lacerating the glove box.) Open the inner door of transition capsule and transfer the material into glove box. Close the inner door.

3.12 Remove all the material and open the inner door. Transfer all the waste and material to

transition room and close the inner door.

3.13 Rotate the knob clockwise to Evacuate. Close the vacuum pump when the vacuum degree reaches -0.8 to -1.0bar in the transition capsule.

Document information:

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