

## Standard Operating Procedure

**SOP155**

---

Title: Routine Cleaning and Inspection Methods of Biological Safety Cabinets

---

Location: CBE Laboratories

---

### **1. PURPOSE**

The intent of this SOP is to describe the procedures and routines for the inspection and cleaning of the CBE biological safety cabinets

### **2. SCOPE**

This SOP applies to all shared safety cabinets in the Centre for Biological Engineering (including in the Wolfson CBE Tissue Engineering laboratory) thus leaving those BSCs out of the scope of this SOP which have permanent or semi-permanent equipment (e.g., the AMBR) placed inside.

### **3. RESPONSIBILITIES**

#### **CBE Laboratory Users**

- Arrange to get trained in the routine BSC inspection and cleaning by the CBE Laboratory Leaders.
- Implement the routine cleaning and inspection of the biological safety cabinets as described in this SOP.
- In case the inspection finds problems with the BSC, report to the RP or LM.

#### **CBE Laboratory Leaders**

- Train the laboratory users in cleaning and inspection of the biological safety cabinets as described in this SOP.
- Ensure that the routine cleaning and inspection is completed and recorded.

#### **Responsible Person (RP)/Laboratory Manager (LM)**

- Schedule annual external safety inspection and planned preventative maintenance.
- Schedule the monthly internal safety inspection.
- Implement the cleaning and inspection of the biological safety cabinet for the annual safety inspection and planned preventative maintenance.

### **4. EQUIPMENT AND MATERIALS**

- CBE Biological safety cabinets
- Paper towels
- 70% IMS solution

---

Version 004

Effective Date: 13<sup>th</sup> June 2018

Review 13<sup>th</sup> June 2020

Written by: A. Chandra	Reviewed by: Q. Rafiq	Approved by: C. L. Kavanagh
------------------------	-----------------------	-----------------------------

## Standard Operating Procedure

**SOP155**

---

Title: Routine Cleaning and Inspection Methods of Biological Safety Cabinets

---

Location: CBE Laboratories

---

- 1:20 & 1: 50 Chemgene solution
- 1% Virkon solution
- Safety glasses
- Stop watch

### **5. PROCEDURE**

#### Step 1: Weekly Rota for BSC Inspection and Cleaning

- 1.1 Turn the BSC off by pressing and holding the Set button, open the front of the BSC, by pulling up the whole of the front.
- 1.2 Remove the BSC grills and place on trolley.
- 1.3 Inspect the tray beneath the grills checking for any stains or spills
- 1.4 Spray 1:20 Chemgene and wipe with paper towels
- 1.5 Wait to dry
- 1.6 Spray 70% IMS and wipe with paper towels

NOTE: Bests practice for wiping is as follows:

- Wipe the ceiling of the BSC
- Wipe the side walls (avoiding going over the UV light) with a wiping motion towards the front of the BSC.
- Wipe the tray with a wiping motion towards the front of the BSC.
- Wipe the inside of the front window.

- 1.7 Replace the grills inside one at a time by wiping the grills all while they are outside the BSC with 1 in 20 chemgene, allow to dry and then with 70 % IMS. Ensure that the grill being replaced is still wet when going into the BSC.
- 1.8 Once all BSC grills are replaced, lower the BSC front.
- 1.9 Turn on the BSC, and turn on the UV light and leave for one hour. Complete the log sheet.  
If BSC is not in use, turn off fully.

#### Step 2: Annual Rota for BSC Inspection and Cleaning

This is performed by RP/LM and team of volunteers. The cleaning is performed after the BSC has had a safety inspection by the external contractor (arranged by the LM/RP). Once the cleaning is finished, attach the Decontamination Form to the External contractor inspection and safety report.

- 2.1 Ensure that the BSC is turned off and the front sash is shut. To turn off the BSC press and hold the SEt button on the BSC remote control till all lights in the display panel are off.
- 2.2 Pull open the front window to the BSC all the way till it will come to a stop.
- 2.3 Remove the BSC grills and place on trolley.
- 2.4 Inspect the tray beneath the grills checking for any stains or spills

---

Version 004

Effective Date: 13<sup>th</sup> June 2018

Review 13<sup>th</sup> June 2020

Written by: A. Chandra	Reviewed by: Q. Rafiq	Approved by: C. L. Kavanagh
------------------------	-----------------------	-----------------------------

## Standard Operating Procedure

**SOP155**

---

Title: Routine Cleaning and Inspection Methods of Biological Safety Cabinets

---

Location: CBE Laboratories

---

2.5 Now wipe all surfaces with Virkon impregnated paper towels starting with the back and moving towards the front.

NOTE: Bests practice for wiping is as follows:

- Wipe the ceiling of the BSC
- Wipe the back wall
- Wipe the side walls (leaving out the UV light) with a wiping motion towards the front of the BSC.
- Wipe the tray with a wiping motion towards the front of the BSC.
- Wipe the inside of the front window.

2.6 Start the stop watch for 10minutes and at the end of the 10 minutes repeat Step 2.5 with 1:20 ChemGene solution followed by 70% IMS impregnated paper towels.

2.7 Close the front window (the grills are sitting outside).

2.8 Wipe each grill with Virkon wipes and replace on trolley.

2.9 Start the stop watch for 10minutes.

2.10 At the end of the 10 minutes, replace the grills inside one at a time by wiping the grills all over outside the BSC with 1:20 Chemgene solution followed by 70% IMS . Ensure that the grill being replaced is still wet when going into the BSC.

2.11 Once all BSC grills are replaced, lower the front.

2.12 Turn on the BSC by pressing and holding the Set button, turn on UV light and leave for one hour.

2.13 If BSC is not in use, turn off fully.

## **6. DOCUMENTATION**

The following records are outputs of this SOP:

- Weekly Lab Cleaning and Inspection rota of CBE Laboratories (arranged by the LM).
- QS-Form-009 Generic Equipment Decontamination Form

These records will be filed in the Biological Safety Cabinets folder and retained in the CBE offices for 10 years.

---

Version 004

Effective Date: 13<sup>th</sup> June 2018

Review 13<sup>th</sup> June 2020

Written by: A. Chandra	Reviewed by: Q. Rafiq	Approved by: C. L. Kavanagh
------------------------	-----------------------	-----------------------------

**Standard Operating Procedure**

**SOP155**

Title: Routine Cleaning and Inspection Methods of Biological Safety Cabinets

Location: CBE Laboratories

**SOP Version History**

Version Reviewed	Date Revised/ Reviewed	Revision Summary	New Version Number
<b>001</b>	<b>20/11/2015</b> <b>By K. Sikand</b>	Changed the weekly cleaning method to reflect current procedure.	<b>002</b>
002	1 <sup>st</sup> March 2016 Reviewed by C. Kavanagh	i)Amendments to the routine cleaning to include : i)Addition of 1:20 and 1:50 dilutions of the new disinfectant Chemgene. ii) an extra 'rinsing step' using 70% IMS which has been re-introduced into the laboratory. The rinsing step has been introduced do remove any residue left behind by the use of Chemgene.	003
<b>003</b>	<b>13/06/2018</b> <b>By J.Bowdrey</b>	Section 5 Removed 1.1 Turn the BSC on and raise the sash up till it reaches working height. Wait until air curtain is stable (all lights are green). Write down the air flow values on the log sheet. Replaced with "Turn off the BSC by pressing and holding the Set button. Removed 1.7. When the BSC air curtain is at stable state (all lights are green). Rewritten as: 1.7 Replace the grills inside one at a time by wiping the grills all while they are outside the BSC with 1 in 20 chemgene, allow to dry and then with 70 % IMS. Ensure that the grill being replaced is still wet when going into the BSC. 2.7 "Close the front window" moved to 2.12, and (the grills are sitting outside).is deleted. 2.8 Turn on the BSC and raise the front sash till it reaches working height.- deleted. 2.10 when the BSC air curtain is at stable state (all lights are green),- deleted 2.12- added "turn on the BSC by pressing and holding the Set button"	<b>004</b>

Version 004

Effective Date: 13<sup>th</sup> June 2018

Review 13<sup>th</sup> June 2020

Written by: A. Chandra	Reviewed by: Q. Rafiq	Approved by: C. L. Kavanagh
------------------------	-----------------------	-----------------------------

**Standard Operating Procedure**

**SOP155**

---

Title: Routine Cleaning and Inspection Methods of Biological Safety Cabinets

---

Location: CBE Laboratories

---


---

Version 004

Effective Date: 13<sup>th</sup> June 2018

Review 13<sup>th</sup> June 2020

Written by: A. Chandra	Reviewed by: Q. Rafiq	Approved by: C. L. Kavanagh
------------------------	-----------------------	-----------------------------