

Standard Operating Procedure

SOP110

Title: USE AND MAINTENANCE OF THE SANYO MCO-19M(UV) MULTIGAS CO₂/O₂/N₂ INCUBATOR AND THE PANASONIC MCO-170MUVH-PE MULTIGAS INCUBATOR

Location: CBE Laboratory Unit

1. PURPOSE

The purpose of this SOP is to describe the procedures for the use and maintenance of the SANYO MCO-19M (UV) Multigas CO₂/O₂/N₂ incubator and the Panasonic MCO-170MUVH-PE Multigas CO₂/O₂/N₂ incubators.

2. SCOPE

This SOP applies to the two SANYO MCO-19M(UV) Multigas CO₂/O₂/N₂ incubators located in the Containment Level 2 CBE Laboratory Unit (H21) and the Panasonic Multigas CO₂/O₂/N₂ incubators in H27. This document describes procedures for the operation, temperature calibration, H₂O₂ decontamination and maintenance of the SANYO MCO-19M (UV) Multigas incubators and the Panasonic Multigas incubators. Environmental operating conditions are set at 37C and 5% CO₂.

NOTE: The SANYO MCO-19(UV) employs SafeCell™ continuous active background ultraviolet light sterilization in combination with the passive resistance of inCusaFe™ copper-enriched stainless steel in chamber construction. This powerful combination destroys mycoplasma and other contaminants in vitro without affecting cell cultures and without downtime.

Important Restrictions: This SOP does not apply to the use and operation of the Sanyo Multigas incubators under O₂ or N₂ conditions. The use of O₂/N₂ within the incubator chamber requires connection of O₂ and/or N₂ gas supply, which when connected for the first time must be subject to the completion of a risk assessment and subsequent revision of this SOP. It does however cover the use of the Panasonic Multigas incubators as a hypoxic incubator, with the use of CO₂ and N₂.

3. RESPONSIBILITIES

Laboratory Personnel:

- (i) Shall complete proper training before using the incubator.
- (ii) Shall ensure that they are familiar with the incubator, its controls, and emergency procedures by reference to this SOP and the Manufacturer's Operating Instructions.
- (iii) Shall ensure that the incubator is suitable for the work they intend to carry out before commencing.
- (iv) Shall carry out the routine inspection and maintenance of the incubator, as required.

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- (v) Shall record any adverse events and alarms that indicate non-conformance or malfunction on the lab Equipment Maintenance log and notify the Laboratory Manager/Responsible Person.

The Responsible Person/Laboratory Manager:

- (i) Shall ensure laboratory personnel are given suitable information, instruction, training and supervision in the correct use and maintenance of the incubators. The requirements for competence to use the incubators should include instruction in the appropriate and inappropriate use, safe working procedures, calibration and decontamination procedures.
- (ii) Shall coordinate routine inspection and maintenance duties to be performed by laboratory personnel (according to SOP004).
- (iii) Shall investigate any reported problems, adverse event, alarms or non-conformities associated with incubator usage.
- (iv) Shall organise the maintenance, repair or servicing of the incubators by trained and authorised contract / service personnel.
- (v) Shall ensure that prior to authorising the commencement of maintenance, repairs or servicing that the incubator is suitably disinfected and that a "Decontamination Certificate" is issued.

4. EQUIPMENT AND MATERIALS

- 1) SANYO MCO-19M (UV) Multigas CO₂/O₂/N₂ InCusaFe and UV Decontamination System CO₂ incubators Operators Manual Or Panasonic Mutligas Incubator
- 2) 70% (v/v) IMS solution
- 3) 1 in 50 Chemgene
- 4) Distilled water
- 5) H₂O₂ Decontamination Kit (MCO-HL) - Sanyo
- 6) H₂O₂ Generator (MCO-HP) - Sanyo
- 7) Tinytag temperature data loggers

5. PROCEDURE

5.1 Set-up and Operation

NOTE: The incubator should be switched on at all times.

The user should refer to the SANYO or Panasonic incubator operation manual for the correct set up and maintenance of incubator.

- 5.1.1. Check the water level in the humidifying pan. **NOTE:** When humidifying water is low: "RH PAN" is displayed in reverse video and blinks

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If required, use the following procedure to fill the humidifying pan or to replace the water.

- a. Lift the humidifying pan cover.
- b. Pull the humidifying pan forward.
- c. Dispose of the remaining water in the pan and clean the pan with a neutral detergent. Rinse it thoroughly with distilled water and wipe it with sterilizing alcohol.
- d. Wipe all moisture from the bottom of the chamber.
- e. Return the pan to the chamber and add sterile distilled water (approx. 1.5 L, preheated to 37°C).
- f. Set the pan with the inner side flush against the back, and replace the cover. Close all gastight split doors, inner door and outer door, and confirm that RH PAN is not displayed in reverse video in the status display area.

NOTE: Preheat the water to be added to the humidifying pan to 37°C - adding low-temperature water will lower the temperature and humidity in the chamber.

CAUTION: When refilling the water in the humidifying pan, make sure any dirt is wiped off the water level sensor with disinfectant alcohol, taking care not to apply excessive force to the lead wires.

5.1.2. Turn ON the power supply switch on the left side of the rear panel of the Incubator.

- Check that the screen is displaying the correct CO₂ density is (5%; 4.85 – 5.15%) and temperature (37C; 36.9 – 37.1C) readings; if not contact Responsible Person or Laboratory Manager for advice.
- **Check the display** status or alarms. When UV lamp is lit: “UV” is displayed in reverse video. When humidifying water is low: “RH PAN” is displayed in reverse video and blinks. When the door is open: “Door: Open” is displayed in reverse video.

NOTE: Refer Operators Manual for alarm details. “OK” is displayed during normal operation.

- **Check the display for fault messages** - A message is displayed when fault occurs.

5.1.3. Inserting vessel(s) into the incubator:

- Wipe the outside surfaces of the vessel that you intend to place inside the incubator with 70% IMS. Be careful not to get containers or trays dirty when taking them in and out.
- Label all vessels correctly, ensuring the contents and the owner is identified (refer to SOP007).

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- Open the door and place vessel(s) inside the incubator. Leave space for ventilation between culture containers (Petri dishes, flasks, etc.). Inadequate spacing may result in uneven temperature distribution and CO₂ gas concentration.

NOTE: During operation, if a water level alarm is displayed in the status display area on the control panel. Quickly refill the water in the pan when the water level alarm is displayed. Adding low-temperature water will significantly lower the temperature in the chamber.

- 5.1.4. After the door is closed the UV lamp automatically switches ON for five minutes, which is sufficient to destroy contaminants during normal operation. If the outer door is not opened for at least 12 consecutive hours, the UV lamp will light for the preset time period every 12 hours.

NOTE: The UV lamp is visibly isolated from the cell culture chamber by a plenum cover, UV sterilization of air and humidity reservoir water remains in process while cell culture continues uninterrupted and unaffected. The lamp ON time is programmable from 0 to 30 minutes depending on user preference and can also be used for overnight or event decontamination (refer to Operators manual for instructions). The following options are available:

Mode	Function
After door opening	UV lamp automatically ON for five minutes after door is closed. Time is factory set, user programmable from 0-30 minutes.
Off	If UV protection is not desired.
Continuous ON (24 hour process)	Useful for overnight decontamination prior to first use or following total chamber wipe-out after maintenance or service.
Continuous ON (repeated 24 hour process)	Useful for extended decontamination for small percentage of organisms that require greater UV dose (incident energy) beyond standard 24-hour cycle.

NOTE: The recommended replacement time for the UV lamp (i.e., when the UV output ratio drops to 60% to 70% of its initial value) is when the accumulated ON time reaches 1,000 hours. When the accumulated ON time reaches approximately 1,000 hours, the "UV" will flash in the status display field on the LCD panel (when the UV lamp is not lit). It is recommended that the

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UV lamp be quickly replaced at this point. Consult a Sanyo sales representative or agent for information on replacing the UV lamp.

5.2 Routine Inspection and Maintenance

5.2.1. Weekly inspections

- (i) Check that the water tray located on the bottom of the incubator is full and pushed to the back of the incubator. Check the water level sensor which flashes when the low level is reached. Refill as required.
- (ii) Check that the UV lamp is working. Open the outer door and then press the door switch with the inner door still closed. Visible blue light can be confirmed from the front of the humidifying pan cover.

CAUTION: UV light is harmful to the eyes, so do not light the UV lamp when the inner door or humidifying pan cover is open. Never turn ON the UV lamp when the humidifying pan cover is removed.

- (iii) Check the incubator for condensation. If water spills from the humidifying pan, or if the doors are left open for a long time, condensation may form on the inside of the doors. If there is evidence that this has occurred, wipe off the condensation with a dry sterile gauze. In particular, clean and disinfect the chamber if the culture medium is spilled. For details, refer to *Routine Maintenance in the Operators Manual*.
- (iv) Check the gauges on the CO₂ cylinders. If any of the gauges read empty seek advice from the Laboratory Manager to arrange a replacement.
- (v) Check incubator for signs of damage and for any visible microbial growth (or smell). If any growth is observed or smell detected, clean the incubator according to the procedure described in Section 7.2.2.
- (vi) Check that the temperature and CO₂ levels are reading within specifications. If the levels are out of limits, inform the Laboratory Manager or Responsible Person.
- (vii) Check the DATALOGGER SCREEN. Record any Alarms or Adverse Events that may have occurred on the Maintenance & Service Record Sheet and report the finding to the Lab Manager/Responsible Person.
- (viii) Check the items inside the incubator correspond to inventory list.
- (ix) Check the door for any abnormalities- if any present inform the lab leader and a lab manager.

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- (x) RECORD the outcome of the inspection (Pass/Fail) on the House Keeping Record Sheet.
- Any discrepancies between the operational parameters and the required incubating parameters as well as any error or alarm messages must be brought to the attention of the Laboratory Manager/Responsible Person.
 - The record should be reviewed by the Laboratory Manager, signed and dated.

5.2.2. H₂O₂ Decontamination Procedure

When the chamber has been contaminated, or when cleaning the chamber prior to starting a culture, or for routine cleaning and decontamination, H₂O₂ decontamination should be performed using the H₂O₂ Generator.

As a minimum, the incubator should be fully cleaned and decontaminated **every month**, this could depend on usage.

NOTE: Check the inner glass door of the incubator for any imperfections which could cause the door to shatter during the decontamination cycle. If any are found please notify the Lab managers.

Use the following procedure to perform H₂O₂ decontamination using the H₂O₂ Generator (MCO-HP).

1. Take out all trays, tray supports, side supports, the humidifying pan cover, the N₂ or O₂ gas injection nozzle, the N₂ or O₂ gas injection nozzle tube, the humidifying pan, the fan cover, and the duct from the chamber. Dispose of the water in the humidifying pan, wipe the inside walls of the chamber with a gauze containing water or alcohol for sterilization.

Check the door for any abnormalities- if any present inform the lab leader and a lab manager.

NOTE: Refer to *Removing Chamber Attachments in the Operators Manual* and remove and clean the inner attachments.

CAUTION: Perform H₂O₂ decontamination with the chamber attachments arranged as specified by Sanyo. Arranging them in a different way may result in insufficient decontamination.

2. Attach the duct and side supports, and set the tray supports in the 2nd, 5th, 9th holes from the top of the side supports. Then set the trays.
3. Pour one bottle of H₂O₂ Decontamination Reagent (MCO-H₂O₂) into the H₂O₂ Generator. Set the two pins on the H₂O₂ Generator in the 2 holes on the lower left side of the duct as shown in Fig. 1 on page 51 of the Operators Manual.

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CAUTION: Using a different H₂O₂ solution may cause explosion or damage to the Incubator, or insufficient decontamination. Do not use chemicals other than the H₂O₂ reagent, such as alcohol. Doing so may result in damage to the H₂O₂ Generator.

CAUTION: Wear gloves when handling the H₂O₂ reagent. Direct contact with the H₂O₂ reagent may result in inflammation of the skin.

4. Connect the H₂O₂ Generator and connector on the bottom right of the far side of the chamber with the enclosed cable. Be sure to keep the connector cap (see Fig. 1 on page 51 of the Operators Manual).
5. Set the humidifying pan cover, humidifying pan, fan cover, the N₂ or O₂ gas injection nozzle and the N₂ or O₂ gas injection nozzle tube as shown in Fig. 2 on page 51 of the Operators Manual, and close the inner door and outer door .

Place a 'Do Not Use' (Annex 1) sign on the front of the incubator **NOTE:** The incubator door is automatically locked preventing the user opening the door until the decontamination cycle is finished and it is safe to open.

CAUTION: When performing H₂O₂ decontamination, make sure that gastight split doors, inner door and outer door are securely closed. During H₂O₂ decontamination, plug the access hole with the silicon cap that is provided. Failure to do so may be harmful to health due to leakage of H₂O₂ gas

6. Press the H₂O₂ Key for 3 seconds. The system check will start.
7. If the system is normal, the following display will appear "Ready to Start". Select **OK** and press the ENTER Key to start H₂O₂ decontamination. Decontamination will be performed automatically to step 10. The buzzer will sound when decontamination has been completed (It takes about 1 hour 40 minutes after warming-up).

NOTE: The outer door will be locked with an electric lock for safety until the decontamination has been completed.

8. During the H₂O₂ mist generation, "H₂O₂ Decon" will flash at the top left corner of the screen.

NOTE: H₂O₂ mist generates from the H₂O₂ Generator and then quickly changes to a gas.

9. After completion of H₂O₂ mist generation, "UV Resolve" will flash at the top of the screen, and H₂O₂ gas resolution by UV light will start.

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10. After H₂O₂ gas resolution, H₂O₂ decontamination has been completed. The following display will appear. Open the outer door and disconnect the cable of H₂O₂ Generator from the connector in the chamber. Then take out the H₂O₂ Generator.

NOTE: Always put on protection glasses and rubber gloves when performing decontamination.

11. The following display will appear "Decon finished". Press the MENU Key to display the menu, select **OK**, and press the ENTER Key to return to the Top Display.

12. Dilute the remaining H₂O₂ reagent in the H₂O₂ Generator with a large volume of water and dispose of it. Rinse and wash the H₂O₂ Generator with distilled water. Then keep the H₂O₂ Generator in a clean environment outside of the chamber.

NOTE: After H₂O₂ decontamination, cover the connector on the chamber side with the connector cap.

13. After H₂O₂ decontamination, surplus H₂O₂ liquid will remain at the bottom of the chamber and in the bottom part of the H₂O₂ Generator duct. This solution contains H₂O₂ at a low concentration (about 1% or less), so put on protective glasses and rubber gloves and wipe it up with a non-woven cloth.

14. Ventilate the chamber sufficiently and place all the attachments back into the chamber.

NOTE: Be sure to attach the connector cap.

CAUTION: The electric lock will remain locked if power fails during H₂O₂ decontamination. After the power comes back ON, the H₂O₂ gas resolution process will start execution and finish automatically. Execute the decontamination again because the decontamination will be incomplete.

CAUTION: Never open the door by unlocking it with the unlock key during H₂O₂ decontamination or H₂O₂ gas resolution with the UV lamp. H₂O₂ gas leakage is potentially harmful to health.

15. Refill the water tray with 1.5L of distilled water and allow incubator to reach the appropriate temperature and CO₂ levels (nominally 37 °C and 5 % respectively) before replacing culture vessels inside.

16. Record the date of the next cleaning/decontamination procedure on the Cleaning Record sheet (refer to Section 6) and the equipment maintenance record sheet.

5.3 Calibration of Incubator Temperature

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NOTE: Before calibrating the incubator, make sure that the incubator is cleaned and decontaminated according to section 5.2.2.

The most appropriate calibration interval for the incubator should be agreed with the laboratory manager. This should take into account the implications of calibration failure - **6 monthly intervals are recommended**. The calibration frequency must be recorded on the Equipment Maintenance log sheet e.g. "retest due date".

The temperature set point for the incubator should be 37°C and the CO₂ set to 5%. The design specification is +/- 1.0 °C of the set point in steady state conditions i.e. Lower Specification Limit (LSL) = 36°C; Higher Specification Limit (HSL) = 38°C.

5.3.1 Test Procedure

- (i) Switch on the incubator at least 2 hours before the start of the test.
- (ii) Place a 'Do not Use' sign (Annex 2) on the front of the incubator indicating that calibration is taking place. **NOTE:** Write the expected completion date/time on the sign.
- (iii) Empty the incubator of flasks and other material and place in an alternative incubator. Inform the owner of the material
- (iv) Fill the reservoir in the base of the incubator with distilled water.
- (v) Place 3 temperature data-loggers in the incubator, one centrally on each of the shelves. The time between readings should be set to 1 minute.
- (vi) Close the incubator door and leave for 10 - 12 hours once steady state conditions have been reached. **NOTE:** Do not open the incubator door during this period.
- (vii) After 10 - 12 hours, retrieve the data loggers and download the captured data on to a computer.
- (viii) Examine the data profiles for each data logger i.e. each of 3 data sets.
- (ix) **NOTE:** Observe only steady state data. Data points at the end of the test must be removed since these represent the recorded temperature drop after the incubator is opened at the end of the test. Remove the final 5% of the data points (~ 36 data points) from the data set.
- (x) Record the maximum and minimum temperatures for each of the data loggers in the calibration log table (see Section 6), together with the serial numbers/ID of the data loggers. Retain a dated copy of the raw data in the equipment file.

5.3.2 Analysis of Results

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- (i) **PASS:** All the data points for each data logger should be within +/- 1°C of 37°C i.e. the minimum recorded temperature for each data (logger) set should > or = LSL (36°C) and maximum temperature should be < or = the HSL (38°C).
- (ii) Attach a status label to the incubator showing the 'Date of Calibration', 'Performed by' and 'Retest Date'.
- (iii) **FAIL:** If the minimum and maximum recorded temperatures are outside the temperature specification limits for one or more data (logger) sets the incubator may need to be calibrated by the manufacturer.
- (iv) Report to the Laboratory Manager if the specification is not met. Refer to the Operators Manual for instructions on calibrating the temperature. .

5.4 Equipment Malfunction

- (i) The incubator alarm sounds if either the CO₂ level has deviated from 5% or the temperature has deviated from 37°C for longer than 15 minutes. An alarm sounding immediately after the incubator is opened should be silenced by pressing the buzzer button on the control panel. If the alarm continues or continues to repeat, seek advice from the Laboratory Manager or Responsible Person and contact the manufacturer for servicing.
- (ii) If any part of the equipment fails or malfunctions, the user should contact the Laboratory Manager. With permission of the Laboratory Manager the user should consult the Operator Instruction Manuals to access fault finding, error displays and troubleshooting procedures.
- (iii) All problems and corrective actions should be recorded in the Maintenance Log (Section 6).
- (iv) If the equipment fails to work or malfunctions and cannot be rectified according to troubleshooting procedures detailed in the Operator and Users Manuals the Laboratory Manager must be informed and a "Do Not Use" notice should be posted on the equipment. Contact the manufacturer for advice and coordinate with the Lab Manager for external maintenance and servicing.
- (v) External maintenance and servicing of the equipment can only be performed after it has been suitably disinfected (refer to SOP003 for further details) and a 'Decontamination Certificate' has been issued (a pro-forma is available on the CBE LEARN page) and the safety checklist completed (refer to Operators Manual).

5.5 Panasonic Multigas Incubator use as a Hypoxic Incubator.

5.5.1. See the manual for the correct set-up

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Make sure that the nitrogen is correctly connected, and there are no leaks.

As per the manual, using the touch screen change the Nitrogen settings to the correct value, leave the incubator to get to these values before starting the experiment.

Note: If an experiment using the incubator as a hypoxic one, please let the lab management know before hand, as they will need to be aware so that the nitrogen cylinders can be changed and also, so that we can order nitrogen if applicable.

Also notify other lab users, that the use of the incubator will change and also the length of the experiment, so that people can organise their work accordingly. Please also put a sign on the front of the incubator stating it is being used as a hypoxic incubator.

5.6 SPECIAL NOTES: HEALTH & SAFETY

5.6.1 General Precautions

- (i) Observe the relevant biological risk and COSHH assessments associated with the work being carried out.
- (ii) Do not place radioactive, toxic, corrosive substances (e.g. chlorine-based substances such as sodium hypochlorite) or samples that release acidic, alkali, or corrosive gas in the chamber. Doing so may cause damage resulting from discoloration or corrosion.
- (iii) Do not use substances releasing explosive vapours, except 70% IMS (used for surface disinfection). This must first be sprayed onto paper towel and then wiped over surfaces.
- (iv) Wear protective disposable gloves, available in all change rooms, before putting your hands inside the incubator. Use appropriate PPE according to the level of containment and the risk assessment for the work.
- (v) Turn off the power switch and disconnect the power supply to the unit prior to any Repair or maintenance of the unit in order to prevent electric shock or injury.
- (vi) Do not touch any electrical parts (such as power supply plug) or operate switches with a wet hands. This may cause electric shock.
- (vii) Disconnect the power plug when the unit is not used for long periods. Keeping the connection may cause electric shock, current leakage, or fire due to the deterioration of insulation.

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- (viii) When using CO₂ gas for control, make sure that there is adequate ventilation. Using CO₂ gas in a small room without adequate ventilation may cause gas poisoning or oxygen deprivation. In addition, when opening the Incubator doors, do not directly inhale the air in the chamber.
- (ix) Always close the inner door and all gastight split doors before closing the outer door. Failure to close the inner door or any gastight split door will adversely affect performance even if the outer door is closed.
- (x) Always open and close the doors gently. Closing the doors forcefully may cause spillage of the culture medium, incomplete closing, or damage to the gasket. Before opening the inner door, check through the glass to confirm that the UV lamp is OFF.
- (xi) Use the handle when closing the outer door. Holding the door in other places may cause injury by getting fingers caught in the door. Do not lean on the outer door. Doing so may result in injury from the outer door coming loose or the Incubator falling over, or it may cause current leakage or electric shock.
- (xii) Be careful of the inside of the outer door. The inside of the outer door may become hot.
- (xiii) Avoid using excessive force on the inner door. Do not put your hand on the glass, poke it with sharp objects, or apply strong force. Doing so may result in injury from breaking the glass.
- (xiv) Check the cause of any alarm buzzer. If an alarm buzzer sounds while the Incubator is in use, immediately check the cause of the alarm. Refer to Operator Manual.
- (xv) Before performing any repairs or maintenance, turn OFF the power switch and unplug the Incubator. Failure to do so may result in electric shock or injury.
- (xvi) Wear gloves when performing maintenance on the chamber. Failure to wear gloves may result in cuts or abrasions from sharp edges or corners.

5.6.2. Precautions when handling H₂O₂ decontamination reagent (MCO-H₂O₂).

- Wear protective equipment, including protective glasses and gloves.
- Do not place inflammable or combustible materials near the area where the reagent is handled.
- Always close the container cover securely to prevent impurities from becoming mixed in the reagent.
- Check the container to make sure that there is no damage, corrosion, or cracking.
- Store the container with the inlet facing upwards, and make sure that the container will not tip or be knocked over.
- After decontamination, dilute the residual H₂O₂ Decontamination Reagent in the H₂O₂ Generator with a large quantity of water and dispose of it, and rinse with distilled water. (Do not wash either the inside or outside of the H₂O₂ Generator with alcohol.)

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Review: 23/06/2022

Written by: A. Iftimia	Reviewed by: P. Hourd	Approved by: R. I. Temple
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Standard Operating Procedure

SOP110

Title: USE AND MAINTENANCE OF THE SANYO MCO-19M(UV) MULTIGAS CO₂/O₂/N₂ INCUBATOR AND THE PANASONIC MCO-170MUVH-PE MULTIGAS INCUBATOR

Location: CBE Laboratory Unit

5.6.3. Precautions when using the UV Lamp

- UV light is harmful to the eyes, so do not light the UV lamp when the inner door or humidifying pan cover is open.
- Never turn ON the UV lamp when the humidifying pan cover is removed.
- Always install the humidifying pan cover even when using the Incubator without turning ON the UV lamp. Leaving the cover uninstalled will affect the chamber temperature distribution and the humidity recovery performance.

6. DOCUMENTATION

Any problems or maintenance including Decontamination should be recorded on the Equipment Maintenance logs, and the House keeping logs.

6.1 QS-form-005 Incubator Calibration Test Record

6.2 QS-Form-009 Decontamination of Equipment Certificate

6.3 Weekly housekeeping checklist

6.4 Equipment Maintenance Record

These records shall be filed in the Equipment File and stored in the CBE Office or otherwise archived for future review or retrieval.

SOP Version History

Version Reviewed	Date Revised/ Reviewed	Revision Summary	New Version Number
001	12/10/12	Annual review completed by K.Sikand. Form is re-organised to reflect the lean SOP template.	002
002	30/11/15 J.Bowdrey	Annual Review- Removed- "Shall complete the inventory each time they use the incubators" from Section 3. Also changed "Shall record any adverse events and alarms that indicate non-conformance or malfunction on the lab Equipment Maintenance log and notify the	003

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Standard Operating Procedure

SOP110

Title: USE AND MAINTENANCE OF THE SANYO MCO-19M(UV) MULTIGAS CO₂/O₂/N₂ INCUBATOR AND THE PANASONIC MCO-170MUVH-PE MULTIGAS INCUBATOR

Location: CBE Laboratory Unit

		<p>Laboratory Manager/Responsible Person.” Removed “NOTE: It is recommended that an inventory of the incubator contents is posted on the front of the incubator, especially when used to quarantine material (see section 8).” From section 5.1.3</p> <p>Altered to “RECORD the outcome of the inspection (Pass/Fail) on the House Keeping Record Sheet” also “The record should be reviewed by the Laboratory Manager, signed and dated” both from Section 5.2.1</p> <p>Altered to The calibration frequency must be recorded on the Equipment Maintenance log sheet e.g. “retest due date”.-Section 5.3. Removed from Section 6.: FSOP 110.1 Warning notice for decontamination procedure. FSOP 110.2 Warning notice for calibration procedure FSOP 110.3 Incubator Training Agreement QS-form-002 : Incubator Preventative and Maintenance Record QS-form-007 : Incubator Inventory record QS-form-019 Cleaning Record Sheet.</p>	
003	26/06/19 JB	Check the door for any abnormalities- if any present inform the lab leader and a lab manager.- added to weekly check and decontamination section	004
004	22/06/20 JB	Addition of Panasonic Multigas incubator. Also addition of Section 5.5. – use of Panasonic incubator as a hypoxic incubator.	005

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