

UV-Ozone Cleaner Operating Procedures

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Start Up

1. Check the step-down transformer power switch is **ON**.
2. Press the **MAIN** power switch on. Both the MAIN and RESET switches will light up.
3. The UV LAMP, OZONE GENERATOR, PURGE and HEATER switch may light if they are in the down or depressed position.



Set Up Substrate Heater – Limit 300 °C

1. The **HEATER** switch should be **ON** and lighted. If not, depress the **HEATER** switch.
2. Press **SET** on the temperature controller.
3. Each digit is controlled independently. Press the **LEFT** arrow key to select the desired digit of the set point to adjust. The desired digit will be highlighted.
4. To change the selected digit, press the **UP** or **DOWN** arrow key.
5. Repeat steps 2 and 3 for each digit until desired set point value is shown in the display. Set point value must be below 300°C.
6. Press **SET** to enter the set point value.
7. The heater will adjust to the new set point value.



Set Up Oxygen Flow Rate

1. Allow the temperature to stabilize before setting oxygen flow rate. Temperature of the reactor can affect the flow rate.
2. Make sure the reactor lid is closed and latched.
3. Set each UV and ozone generator switches to the mode of operation for your process:
DOWN – button depressed and lighted to engage operation during process time.
UP – button not lighted. Operation not used during process time.
4. Set the process timer to **1 minute**.

To set the timer, press the increment key below the digit you wish to set. Each depression increases the digit by 1. If you pass the number you want, just keep pressing the key and after the digit reaches 9 it will go back to 0.
5. Press **START**. The **RESET** switch will go out and the oxygen inlet valve will open. Also the UV lamp and ozone generator will start if selected.



DO NOT OPEN LID DURING PROCESS.

6. Adjust the flow rate of the oxygen on the flow meter to the desired level.
7. At the end of the 1-minute process time, The **START** light will go out, the oxygen will stop flow, the UV lamp and ozonizer will turn off, and there will be a 3 minute nitrogen purge.
8. Wait for **PURGE** lamp to turn off.

Process Operation

1. Once the temperature and oxygen flow has been set, unlatch and open the reactor lid.

2. Position substrate in the center of platen.

CAUTION: The platen will be hot if using heater.

3. To close the lid, lift with left hand and release support rod on right side of the reactor lid with right hand. To release, slide rod toward you.

4. Lower reactor lid and secure both latches.

5. Set the process timer to **XX** minute.

To set the timer, press the increment key below the digit you wish to set. Each depression increases the digit by 1. If you pass the number you want, just keep pressing the key and after the digit reaches 9 it will go back to 0.

9. Press **START**. The **RESET** switch will go out and the oxygen inlet valve will open. Also the UV lamp and ozone generator will start if selected.

DO NOT OPEN LID DURING PROCESS.

6. At the end of the process time, The **START** light will go out, the oxygen will stop flow, the UV lamp and ozonizer will turn off, and there will be a 3 minute nitrogen purge.

7. When the **PURGE** light goes out, unlatch and raise the lid.

Manual Purge of Chamber

1. With reactor lid closed and latched, press **PURGE**.
2. The nitrogen purge will continue until switch is pressed and in the UP position.

Notes on Manual Purge:

- a. The manual purge will not stop when **START** is pressed.
- b. If the manual purge is on during a process, the nitrogen will dilute the ozone concentration.



Process Abort

1. To stop a process press **RESET**.
2. A **MANUAL PURGE** must be performed.
3. With lid closed and latches, press **PURGE** switch. Allow at least 3 minutes for purge.
4. At the end of 3 minutes, press PURGE switch again to shut of the nitrogen flow.
5. You may now unlatch the reactor lid and open the chamber.



Shut Down

1. Remove substrate from chamber.
2. Carefully close reactor lid by releasing the support rod on the right side of the lid.
3. Latch the lid close.
4. Turn off **MAIN** switch.
5. Record use in logbook.