U.S. MICRO-SOLUTIONS INC.
AN ENVIRONMENTAL MICROBIOLOGY LAB

# Operating Instructions for the SAS Duo 360

The SAS DUO 360 is appropriate for use in cleanrooms and other applications that demand the testing of a large volume of air in a short period of time. The following volumes of air are suggested:

- Visibly contaminated areas: 50-100 liters of air
- Normal areas (house): 100-200 liters of air
- Sterile or high-risk areas (cleanrooms, operating rooms): 500-1000 liters of air

**General Procedure** (for cleanroom procedure see below)

1. Configure air sampler.
    a. Press the "On-Off Switch" button on the bottom of the sampler to turn the sampler on. The menu should read "Select Head". Press "Enter".
    b. Use the arrows to toggle through the menu to select "Head Left + Right" and press "Enter".
    c. Menu should read "Start for XX", where "XX" is the most recently sampled volume.
        i. If this is the volume you wish to use, proceed to step 2.
    d. To select a different volume than displayed at startup, use the down arrow to toggle the menu to "Standard Mode". Press "Enter".
    e. The menu should read "S. Progr XX".
    f. Use the up/down arrows to toggle the menu to your desired volume.
    g. Once you select your desired volume, press "Enter".
    h. Menu should read "Start for YY" with "YY" being your chosen volume.
2. Clean hands with an isopropyl alcohol pad.
3. Remove the aspirating heads and clean all surfaces with an isopropyl alcohol pad and dry with sterile gauze.
    a. Keep your hand to the side of the aspirating heads (not over the top) when removing or replacing the heads.
4. Insert plates into sampler.
    a. For 55 mm plates: load plates into sampler and remove plate lids.
    b. For 90 mm plates: remove plate lids and load plates into sampler.
5. Replace the aspirating heads and tighten into place.
6. Press "Start".
7. When sampling is complete, remove the aspirating heads.
    a. For 55 mm plates: replace the lids of the agar plates and remove the plates from the sampler.
    b. For 90 mm plates: remove the agar plates from the sampler and replace the lids of the plates.
8. Engage the plate lid locking mechanism.
9. If collecting additional samples, repeat process beginning at step 3.

**Quality Control**

Submit blank unexposed agar plates for each lot and type of media used for the sampling event to serve as negative controls.

**Reference**

Bioscience International SAS DUO 360 Instruction Manual, 11333 Woodglen Drive, Rockville, MD 20852, September 2012

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## Cleanroom Procedure

1. Wipe the exterior of the sampler with a sporicidal agent prior to transfer into the cleanroom.
2. Don proper garb and sterile gloves. Sanitize gloves with sterile 70% isopropyl alcohol (IPA).
3. Place sampler and media on work surface/table that has been sanitized with sterile 70% IPA.
4. Saturate a lint-free wipe with sterile 70% IPA and place on work surface.
5. Configure air sampler.
    a. Press the "On-Off Switch" button on the bottom of the sampler to turn the sampler on. The menu should read "Select Head". Press "Enter".
    b. Use the arrows to toggle through the menu to select "Head Left + Right" and press "Enter".
    c. Menu should read "Start for XX", where "XX" is the most recently sampled volume.
        i. If this is the volume you wish to use, proceed to step 6.
    d. To select a different volume than displayed at startup, use the down arrow to toggle the menu to "Standard Mode". Press "Enter".
    e. The menu should read "S. Progr XX".
    f. Use the up/down arrows to toggle the menu to 1000 liters and press "Enter".
    g. Menu should read "Start for YY" with "YY" being your chosen volume.
6. Sanitize gloves with sterile 70% IPA.
7. Remove aspirating heads and clean all surfaces of the head with a wipe saturated with sterile 70% IPA. Discard wipe.
8. Place cleaned heads on the work surface on top of the IPA wipe.
    a. Keep your hand to the side of the aspirating heads (not over the top) when removing or replacing the heads.
9. Insert plates into sampler.
    a. For 55 mm plates: load plates into sampler and remove plate lids.
    b. For 90 mm plates: remove plate lids and load plates into sampler.
    c. Place plate lids on the IPA wipe with the edges of the lid touching wipe.
10. Quickly replace the aspirating heads and tighten into place.
10. Press "Start".
11. When sampling is complete, sanitize gloves with sterile 70% IPA.
12. Remove the aspirating heads, keeping your hand to the side of the heads.
    a. For 55 mm plates: replace the lids of the plates and remove the plates from the sampler.
    b. For 90 mm plates: remove the plates from the sampler and replace the lids of the plates.
13. Engage the plate lid locking mechanism
14. If collecting additional samples, repeat process beginning at step 6.

## Quality Control

Submit two blank unexposed agar plates for each lot and type of media used for the sampling event to serve as negative and positive (growth promotion) controls.

## Reference

Bioscience International SAS DUO 360 Instruction Manual, 11333 Woodglen Drive, Rockville, MD 20852, September 2012