**Purpose:**

To assure that the TANGO is started up and shut down according to the procedure outlined in the User’s Guide. Shut down may be initiated by user for short period or an extended period. Following extended shut down periods, restart as described below must be performed.

**Limitations and Precautions:**

* If necessary to interrupt a run, it should be for only a short time and for a good reason. The PAUSE disturbs the chronological sequence of sample processing and a long break could yield erroneous results. Any pause longer than one (1) minute may result in flagged results.
* If the controls are not correct, additional rinsing with System Liquid and Wash Solution may be required.

**Required Materials:**

* DI Water
* Microcide SQ

**Procedure:**

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| **Step** | **Action** | **Related Documents** | |
| **Start Up** | | | |
| 1. | Turn on the TANGO. |  | |
| 2. | The main switch is found on the left side of the instrument, in front of the power cord. |  | |
| 3. | Once the instrument is powered on, the pipette arms will move to the front of the analyzer. |  | |
| 4. | Turn on the touch screen monitor.   * The touch screen monitor must be on prior to turning on the PC so that the touch screen option is functional. |  | |
| 5. | Turn on the PC.   * The TANGO software will start automatically. |  | |
| 6. | Login to the software.   * When the login screen appears, enter operator User ID and password. * Select the OK button or press the Enter key. |  | |
| 7. | The TANGO will automatically go through the initialization process. |  | |
| 8. | Do not load plates, reagents or samples until initialization is complete. |  | |
| **Step** | **Action** | **Related Documents** | |
| **Start Up (continued)** | | | |
| 9. | The warm-up/cool down operations will take several minutes.   * The Status icons will flash red if the area is not within the specified temperature range or if the volume in the containers reaches the lower or upper limit. |  | |
| 10. | If the automatic rinse function is activated, the rinsing will be performed immediately after the TANGO completes initialization. |  | |
| 11. | The automatic rinse function takes an additional 5 minutes. |  | |
| 12. | When the TANGO system is ready for operation, ‘Ready’ appears in the analyzer status field and none of the status icons are flashing red. |  | |
| **User Initiated Pause** | | | |
| 1. | A run can be interrupted at any time by selecting the ‘Pause’ button. | |  |
| 2. | The ‘Pause’ button appears with a green X across the button. | |  |
| 3. | Reasons a run must be stopped are to load additional reagents or to remove an urgently needed sample tube. | |  |
| 4. | Functions in progress, such as pipetting and centrifugation, are completed. Then the system will pause. | |  |
| 5. | The incubation will continue. | |  |
| 6. | A run should be interrupted for a short time only since the pause disturbs the chronological sequence of sample processing. A long break may cause erroneous test results.   * Time in ‘Pause’ should not exceed one minute to ensure that samples do not exceed the maximum incubation time. * If incubation time is exceeded, the samples affected by the Pause are flagged. | |  |
| 7. | To restart the system, touch the ‘Pause’ button again. | |  |
| 8. | If the system is not started in 45 seconds, an audible signal (beep) sounds. If the time in ‘Pause’ exceeds one minute, a warning message is displayed and all affected wells will be flagged with flag symbol 16. | |  |

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| **Short Term Shut Down** | | |
| 1. | Press ‘Shut Down’ in the ‘Shut Down Tango’ window   * The software will automatically shut off the PC, if it does not, wait until the screen instructs you to turn off the PC | Tango Maintenance |
| 2. | After the PC is switched off, switch off the analyzer by pressing the main switch on the left side of the TANGO. |  |
| 3. | Once it has been powered off, the operator can remove all the mechanical assemblies.   * Wait at least 1 minute before restarting analyzer |  |

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| **Long Term Shut Down** | | |
| 1. | If the instrument will not be used for a week or more, rinse the system with Cleaning Solution first. |  |
| 2. | Empty the System Liquid and Wash Solution Containers |  |
| 3. | Fill both containers with 2L of DI water. |  |
| 4. | Select ‘Definitions’ in the Main Menu, then select ‘Auto Rinsing’. |  |
| **Step** | **Action** | **Related Documents** |
| **Long Term Shut Down (continued)** | | |
| 5. | Enter a start time that is approximately one minute later than the actual system time.   * The system time is displayed in the lower right corner of the monitor. |  |
| 6. | Select the ‘Active’ button so that the check mark appears in the box.   * This activates the rinsing function. |  |
| 7. | Select the ‘OK’ button. |  |
| 8. | The analyzer will be rinsed automatically with the preset rinsing cycles and soak time.   * This procedure should take about five (5) minutes |  |
| 9. | After rinsing is complete, empty the Washing Solution, Cleaning Solution and System Liquid containers. |  |
| 10. | Clean the containers with Microcide SQ. |  |
| 11. | Rinse thoroughly with DI water. |  |
| 12. | Empty and rinse the Waste Container. |  |
| 13. | Select ‘Definitions’ in the Main Menu, then select ‘Auto Rinsing’. Remove the check mark in the ‘Active’ box. |  |
| 14. | Remove all plates from the analyzer.   * Select the ‘Remove Plates’ button in the ‘Plates Loading’ window to unload all plates. |  |
| 15. | Remove all reagents from the analyzer. |  |
| 16. | Turn off the computer.   * Select the ‘Shutdown’ button in the Main Menu. * Select the ‘Logout’ button. * If the computer is not turned off automatically, turn it off by pressing the On/Off switch. |  |
| 17. | After the computer is turned off, turn off the analyzer using the main switch on the left side of the instrument. |  |
| **Restart After Extended Shut Down** | | |
| 1. | If the analyzer was not in use for an extended period of time, clean the containers with diluted Decontamination Clean. |  |
| 2. | Rinse containers thoroughly with DI water. |  |
| 3. | Fill the containers with the appropriate solutions and connect the sensors and tubing.   * System Liquid is DI water. * Wash Solution is phosphate buffered saline (PBS). * Cleaning Solution is Diluted Daily Clean. * The Waste Container remains empty. |  |
| 4. | Use the switch located on the left side of the instrument to turn the TANGO on. |  |
| 5. | The pipette arms will move to the front of the instrument. |  |
| 6. | Turn on the monitor screen, enabling the touch screen. |  |
| **Step** | **Action** | **Related Documents** |
| **Restart After Extended Shut Down (continued)** | | |
| 7. | Turn on the PC.  Note: After Windows start up, the TANGO software will launch automatically. |  |
| 8. | In the Login window, enter User ID and Password. |  |
| 9. | Touch ‘OK’. Note: The TANGO will go through initialization. |  |
| 10. | When the instrument is ready, ‘Ready’ will appear in the lower left corner of the monitor. |  |
| 11. | Select ‘Maintenance’ then ‘Rinsing’ and set the number of cycles to 2-3-1. Touch ‘OK’. The tubing is washed and filled with system liquid and wash buffer. |  |
| 12. | Select ‘Definitions’ then ‘Auto-Rinsing’ and enable the auto rinsing by selecting the ‘Active’ box.   * Set the desired interval time for automatic rinsing. |  |
| 13. | After the rinse cycles are complete, load plates and reagents. |  |
| 14. | Run controls.   * If the controls are not correct, repeat rinsing with System Liquid and Wash Solution by pushing the ‘decontamination’ button, then rerun controls. |  |

**Referenced Documents:**

TANGO User Guide, Version 3.3