**Purpose:**

To assure that the TANGO is maintained according to the User’s Guide and the manufacturer’s recommendations.

**Required Materials:**

* CLR Water
* New Suspension Cup
* Disinfectant
* Microcide SQ Solution

**Limitations and Precautions:**

To prevent contamination of the system, regular monthly decontamination of the system is necessary. Monthly maintenance includes use of a Microcide SQ Solution that is a highly corrosive fluid. Using Daily Clean and the Microcide SQ Solution consecutively can lead to salt formation. These two cleaning procedures should not be performed immediately after one another.

**Procedure:**

|  |  |  |
| --- | --- | --- |
| **Step** | **Action** | **Related Documents**  |
| **A.** | Preparation |  |
| 1. | Turn off the TANGO. |  |
| 2. | Remove the Acrylic Glass Cover. |  |
| 3. | Obtain the monthly maintenance form and record the date and initials of the person performing the maintenance as it is completed. |  |
| **B.** | Replace the suspension cup. |  |
| 1. | Remove the gray plastic cover. |  |
| 2. | Remove the cup by pulling straight up from the top. |  |
| 3. | Wipe the inside of the splash bowl with gauze or paper towel. |  |
| 4. | Remove the plastic splash bowl and inspect it for cracks or breaks.* If there are cracks or breaks, replace with a new splash bowl.
* If no cracks or breaks are present, clean the splash bowl with 10% bleach solution or other disinfectant used in the lab.
 |  |
| 5. | Rinse the cleaning solution from the bowl or wipe with a cloth moistened with CLR water and then dry the bowl.* Ensure that the splash bowl is completely dry and that no liquid escapes the splash bowl.
* The electronics or motor may be damaged by exposure to liquids.
* Residual cleaning solution left in the cup may lead to hemolysis.
 |  |
| 6. | Replace the splash bowl. |  |
| 7. | Insert a new suspension cup from the top, ensuring that the new cup is completely seated on the hexagon motor axis. |  |
| 8. | Clean the gray plastic cover with CLR water, dry completely and place it over the cup. |  |
| 9. | Reinsert the Acrylic Glass Cover. |  |
| 10. | Turn on the TANGO. |  |
| **~~C.~~** | ~~Flush the system with Microcide SQ Solution.~~ |  |
| ~~1.~~ | ~~Prepare Microcide SQ Solution.~~* ~~See Microcide SQ Solution SOP~~
* ~~Fill an appropriate container or flask with 400mL of Microcide SQ Solution.~~
 | ~~Microcide SQ Solution SOP~~ |
| ~~2.~~ | ~~Unscrew the tubing from the Wash Solution and System Liquid containers.~~ |  |
| ~~3.~~ | ~~Place the tubing in the container with the Microcide Solution.~~* ~~The ends of the tubing must be completely submerged in the Microcide SQ Solution.~~
 |  |
| ~~4.~~ | ~~Perform Decontamination by means of the ‘Decontamination’ function with the following parameters.~~* ~~Pipettor Cycles: 2~~
* ~~Washer Cycles: 3~~
* ~~Suspension Cycles: 1~~
 |  |
| ~~5.~~ | ~~Once the rinse cycles are complete, let the Microcide SQ Solution sit in the instrument for 15 minutes.~~ |  |
| ~~6.~~ | ~~During this time, remove the tubing from the Microcide Solution and rinse with CLR water. Also, remove the cover of the suspension cup and rinse thoroughly with CLR water. Dry both the tubing and the cover.~~ |  |
| ~~7.~~  | ~~After the Microcide SQ Solution has sat in the TANGO for 15 minutes, fill an appropriate container with 2L of CLR water.~~* ~~Place the tubing from the System Liquid and Wash Solution containers in the CLR water.~~
* ~~Rinse the system by means of the ‘Decontamination’ function with the following parameters.~~
* ~~Pipettor Cycles: 6~~
* ~~Washer Cycles: 5~~
* ~~Suspension Cycles: 3~~
* ~~Once the rinse is completed, reconnect the tubing back to the System Liquid and Wash Solution containers.~~
 |  |
| **~~D.~~** | ~~Clean and Decontaminate Containers~~~~NOTE: This step may be done, as time allows, during the 15 minutes the Microcide SQ Solution is sitting in the instrument.~~ |  |
| ~~1.~~ | ~~Decontaminate the System Liquid and Wash Solution containers.~~ * ~~Unscrew the cap from both.~~
* ~~Empty the contents of each container.~~
* ~~Divide the remaining Microcide SQ Solution equally between the two containers.~~
* ~~Screw the cap back on each container and shake thoroughly.~~
* ~~Empty each container, reserving the Microcide SQ for step 2, and rinse thoroughly with CLR water.~~
* ~~Refill containers with appropriate liquid and replace caps. Ensure there are no bubbles in the containers prior to priming.~~
 |  |
| ~~2.~~ | ~~Decontaminate the Waste Container.~~* ~~Disconnect sensor cable.~~
* ~~Unscrew nozzle from the container and place it in container or on absorbent paper to collect the fluid from the waste line.~~
* ~~Unscrew cap and empty container according to institutional regulations.~~
* ~~Add Microcide SQ Solution reserved from step 1 to the container.~~
* ~~Screw cap on the container and shake thoroughly.~~
* ~~Allow the solution to stand in the container for 30 minutes.~~
* ~~After 30 minutes, unscrew cap and empty Microcide SQ Solution from the Waste container.~~
* ~~Replace nozzle and cap on the container.~~
* ~~Connect Sensor Cable.~~
* ~~Place Waste container back on shelf.~~
 |  |
| **E.** | Check Pipettor Needle position. |  |
| 1. | On the Main Menu, select Maintenance / Teach Coordinates. |  |
| 2. | The two pipetting needles will move to the front corners of the instrument. |  |
| 3. | The middle of the screen will show a schematic representation of all the “teaching positions” for the needles.* A rectangle below the schematic will read “Device Initializing”.
* Wait until the message changes to “Please select area to adjust”.

NOTE: DO NOT change any settings in the “Teach Coordinates” program for other reference positions other than the Right and Left Pipettor Needles. Changing the other coordinates may cause the needles to crash and damage the instrument.* Select the ‘Ref Left’ button.
* The left needle will move to a position over the reference position.
* The teaching window will open in the center of the screen.
* Use the left shift 4xs (each time goes down 1/2 the distance, then 1/2 again, etc) then your page up and down keys.
* The needle will move down to its reference position.
* The needle should be directly over the small white cavity in the center of the reference position and flush with the top edge of the reference point.

NOTE: A single sheet of standard copy paper should be able to be placed between the needle and the reference position.* If the needle is not properly positioned:
* Verify that the needle is not bent. If it is, it may be gently straightened.
* If alignment is slightly off (3-4 mm) adjust the X, Y and Z axis.
* The arrow keys on the keyboard control the X-axis (left/right) and the Y-axis (front/back).
* The “PgUp” and “PgDn” keys control the Z axis.
* If alignment is off more than slightly, contact Technical Support.
* Once the left needle is properly aligned, select OK from the screen to save the coordinates and close the teaching window.
* Select the ‘Right Ref’ button.
* The right needle will move to a position over the reference position.
* The teaching window will open in the center of the screen.
* Follow steps E.3.d-f above.
* Select the ‘Quit’ button to close the ‘Teach Coordinates’ window and return to the TANGO program.
 |  |
| **F.** | Turn the TANGO off. Wait 10 seconds and turn the TANGO back on. The TANGO will go through initialization. Wait until ‘Ready’ appears in the analyzer status field. |  |
| **G.** | Complete the Monthly Maintenance section. |  |
| **H.** | Load reagents and samples. |  |
| **I.** | Run controls before resuming testing on the TANGO. |  |
| **J.**  | Monthly Database Backup.* Record action on Monthly Maintenance section.
 | Monthly Database Backup  |

**Referenced Documents:**

TANGO User Guide, Version 3.0.2