Dimension Vista Maintenance

Purpose

This procedure provides instructions for performing DIMENSION VISTA MAINTENANCE. Chemistry personnel must be able to use the Operators Guide and the iGuide to maintain and perform the functions required for everyday operation of the analyzer.

Policy Statements

This procedure applies to Chemistry personnel responsible for maintaining and servicing the Dimension Vista and includes miscellaneous duties.

Materials

Supplies
Vista Toolbox • (STP) Can be found in the cupboard to the right of the RXL. • (MIN) Can be found under the sink next to the Millipore. **Bacteria Paddle** – PN 1000035686 SMN 10450995
Equipment
Dimension Vista Systems • Dimension Vista 500 Minneapolis - SN DV330942 • Dimension Vista 500 St. Paul - SN DV330946
Media
• CH5.102.f2 – Dimension Vista 500 Maintenance Log • Vista Quick Guide

Definitions

"**OG**"- Refers to the Dimension Vista Operators Guide

Special Safety Precautions

Refer to laboratory safety policies and procedures.
Follow safety procedures provided in the "OG" methods.

Procedures:

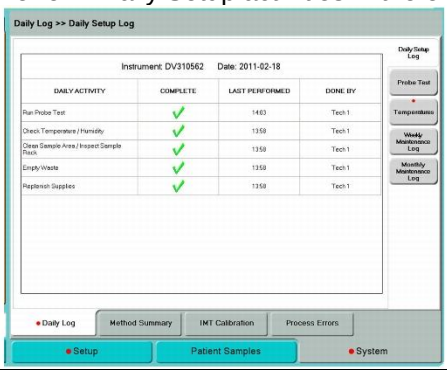
General Instrument Care

Step	Action	Related Document
1	Routinely clean the outside surface of the entire Vista using a cloth dampened with warm, soapy water.	

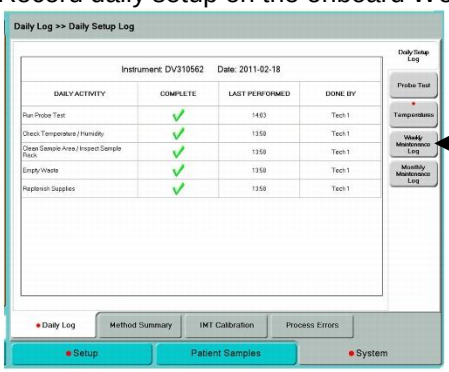
Daily Setup & Maintenance - Nights

Step	Action	Related Document
1	In Sunquest, perform function OFC on methods: VISM: Minneapolis VISS: St Paul	
2	Respond to Reagent Needs	iGuide Ch 4 - Reagent Needs
3	Observe that automatic Off-Peak Activities are performed by Vista	iGuide Ch 4 - Off-Peak Activities
4	Confirm that a Probe Test is automatically performed during OPA	iGuide Ch 4 - Manual Probe Test

Daily Setup & Maintenance - Days

1	Perform Daily Setup activities in the electronic Daily Setup Log 	iGuide Ch 4 - Daily Setup
2	Review temperatures and humidity	iGuide Ch 4 - Review Temperatures
3	Clean the sample lane area and inspect the sample racks (Skip to step 4 in iGuide)	iGuide Ch 4 - Clean Sample Rack Area
4	Empty waste containers	iGuide Ch 4 - Empty Waste
5	Replenish supplies	iGuide Ch 4 - Replenish Supplies
6	Record daily setup on the onboard Daily Setup Log and on the Dimension Vista Daily Maintenance Log	iGuide Ch 4 - Record Daily Setup
7	Remove hazardous waste flexes by entering the SETUP → INVENTORY → REAGENTS, select each Flex with the status of EMPTY and unload. Place in the appropriate hazardous waste receptacle.	iGuide Ch 4 - View Reagent Inventory
8	Remove empty/expired vials & carriers	iGuide Ch 6 - Unload Calibrators
9	Clean the touchscreen	iGuide Ch 7 - Clean the Touchscreen

Weekly Maintenance

Step	Action	Related Document
1	Clean reagent residue from baseplate	iGuide Ch 7 - Clean Reagent Residue
2	Inspect IMT module sample port for salt crystals	iGuide - Ch 7 - Inspect IMT Module
3	Record daily setup on the onboard Weekly Maintenance Log  and on the Dimension Vista Daily Maintenance Log	iGuide Ch 7 – Weekly Maintenance Log

Monthly Maintenance - Nights

Step	Action	Related Document
1	Inspect IMT peristaltic pump tubing for flattened areas	iGuide Ch 7 - Inspect IMT Peri Pump Tubing
2	Clean Flex inserts	iGuide Ch 7 - Clean Reagent Flex Inserts
3	Clean Sample/Reagent drains	iGuide Ch 7 - Maintaining the Drains
4	Clean Aliquot Probe tip	iGuide Ch 7 - Clean Aliquot Probe Tip
5	Replace / clean air filters	iGuide Ch 7 - Replace Air Filters
6	Clean Aliquot Waste Chute	iGuide Ch 7 - Clean Aliquot Waste Chute
7	Restart Vista® 500 software, allow ½ hour of downtime	iGuide Ch 2 - Restart Vista software

Monthly Maintenance - Days

1	Wipe down sample rack with soapy water	
2	Water culture setup (see procedure below)	
3	Replace biohazard insert for Waste A & B	
4	Perform System Check procedure (see below)	

Water Culture Sampling / Setup

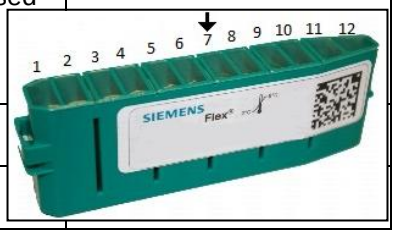
Step	Action	Related Document
See the procedure below and attached. This procedure supersedes the one located in the iGuide.		
1	Obtain a Millipore Sampler Assembly. Write the date, time and sampling site on the outside of the collection case. Sampler is found in: MIN: Located in Micro, STP: Located by the RXL Millipore	Dimension Vista Bacterial Monitoring
2	Clean the BioPak Vent Valve port with chlorhexidine.	
3	Ensure that the WPM is not in “Filling Tank” mode (SETUP → SUPPLIES → MAINTAIN WATER SUPPLY, green bar at the top of the page, note whether it says “OPERATE” or “FILLING TANK”)	
4	Navigate to ADVANCED → DIAGNOSTICS → PRIME PUMPS	
5	Change all pumps to 20 then click PRIME ALL.	
6	Ensure that the WPM is in Filling Tank mode (See step 3 above). If it is not, repeat step 4-6	
7	Place a bucket / flask / beaker under the Vent Valve port, open the Vent Valve and allow approximately 500mL of water to drain	
8	Separate the collection case from the sampler paddle.	

Water Culture Sampling / Setup (cont)

9	Collect the appropriate volume to fill the collection case to the fill line, and then close the valve.	
10	Insert the sampler paddle firmly into the collection case. Allow the water to uniformly wet the filter surface, but do not shake the collection case.	
11	Carefully lay the sampler assembly, with paddle down, on a flat surface. Wait 30 seconds while the liquid filters through the sampler paddle.	
12	Remove the sampler paddle from the collection case. Shake off any excess liquid from the sampler paddle with a firm snap of your wrist. Empty the collection case and re-insert the sampler paddle. Make sure the sampler assembly has an airtight seal to prevent drying during incubation. Drying may cause erroneous results.	
13	[MIN] Give to Micro for following incubation / reading steps [STP] Chemistry staff performs the following steps	
14	Incubate the sample assembly at 25-35°C for 48 to 72 hours.	
15	Remove the sample assembly from the incubator and the sampler paddle from the collection case. Examine the filter surface and count the number of colonies directly from the filter surface.	
16	Samples should be read after 48 to 72 hours and results should be reported. If bacteria is evident at >10cfu/mL, repeat testing using the steps above.	
17	If repeat testing still reveals >10cfu/mL, and it is determined that the WPM is the source, contact the CCC at the number below.	

System Check Procedure

Step	Action	Related Document
Per Siemens Healthcare Diagnostics Urgent Medical Device Correction 14-53 – November 2014, a System Check with CHK solution should take place once a month to determine if the R1 or R2 reagent probes have deteriorated significantly. This can also be used to troubleshoot QC flags and error messages.		
1	Logon as ADMIN	iGuide – Ch8 – ABS/CHK
2	Navigate to ADVANCED > DIAGNOSTICS > SYSTEM CHECK	
3	Scan the sample rack barcode and verify the correct numbers are displayed in the sample rack barcode field. Verify the correct position is displayed in the sample rack position field.	
4	Place a sample cup filled with red CHK fluid onto the sample rack in the designated position. Use well 7 (counted from the left with the barcode facing you) from an unused flex. This well will not be used for the CHK procedure onboard.	
5	Load the CHK flex from step 4 onto the system.	
6	Select Order System Check	



System Check Procedure (cont)

7	Place the rack in the sample lane and wait for tests to complete (~30 min)	
8	Test results can be reviewed on the System Check screen. Print a copy of the results by selecting PRINT.	
9	Any failures are displayed in red on the System Check screen. Contact the Customer Care Center if there are any red items, as this indicates issues outside the scope of this procedure.	
10	On page 2 of the printout, find CR2BS FLEX_SERVER_1. In the next column, find "3. Result". Record the MEAN (3rd overall column) on the maintenance log for CR2BS MEAN.	
11	Also on page 2 of the printout, find CR1BS FLEX_SERVER_1. In the next column, find "3. Result". Record the MEAN (3rd overall column) on the maintenance log for CR1BS MEAN.	
12	Calculate the difference using this equation: $\frac{\text{(Highest MEAN – Lowest MEAN)}}{\text{Highest MEAN}} \times 100 =$ % difference Record the % difference on the maintenance log.	
13	If the % difference is >4%, replace the probe (R1 or R2) with the LOWEST mean, where CR1BS is the R1 mean, and CR2BS is the R2 mean.	iGuide CH7 – Maintaining Probes (Reagent Probe)
14	Remove and discard the used flex in the red trash. NOTE: THIS FLEX MUST BE REMOVED AFTER SINGLE USE!	

Other Maintenance

Step	Action	Related Document
1	Procedures for replacing Water Purification Module (WPM) Components can be found in the iGuide or OG. Alerts on screen will tell the operator when to perform maintenance.	iGuide Ch 7 - Replace WPM Components
2	Procedures for other, non-routine maintenance items can be found in the iGuide, Chapter 7.	iGuide Ch 7 - Other Maintenance

Limitations

For non-routine maintenance and problem solving help call the Siemens Customer Care Center (CCC) at 1-800-441-9250

NOTE: Document all calls on the Maintenance Log and record the assigned reference number.

Procedure Notes

It is the responsibility of all Chemistry staff to assure all maintenance and proper documentation is completed at the required interval.

The Manufacturer's Operating Guide and iGuide should be the first reference when performing maintenance on the RXL System and components.

References

1. Dimension Vista Clinical Chemistry Operators Guide
2. Dimension Vista iGuide (onboard the analyzer and on select computers)
3. Dimension Vista Water Sampling Procedure, Rev A, May 2013
4. Siemens Urgent Medical Device Correction 14-53 – November 2014

Historical Record

Version	Written/Revised by:	Effective Date:	Summary of Revisions
1.	David Helfinstine/Lichty	November 15, 2014	Initial Version
2.	L. Lichty	May 21, 2015	Added restart software
3.	L. Lichty	January 1, 2016	Revised monthly maintenance to night shift, some daily tasks to day shift