



HEALTH HOLDING

HAFER ALBATIN HEALTH
CLUSTER
MATERNITY AND
CHILDREN HOSPITAL

Department:	Laboratory and Blood Bank (Microbiology)		
Document:	Internal Policy and Procedure		
Title:	Vitek 2 System		
Applies To:	All Laboratory Staff		
Preparation Date:	January 02, 2025	Index No:	LB-IPP-083
Approval Date:	January 16, 2025	Version:	2
Effective Date:	February 16, 2025	Replacement No.:	LB-IPP-249(1)
Review Date:	February 16, 2028	No. of Pages:	04

1. PURPOSE:

- 1.1 To establish system and set responsibilities for work.
- 1.2 To elucidate the accurate operating procedure for Vitek 2 System machine.

2. DEFINITIONS:

- 2.1 N/A

3. POLICY:

- 3.1 The accurate operating procedure for Vitek 2 System.

4. PROCEDURE:

4.1 Suspension Preparation:

- 4.1.1 Sterile loop is used to transfer a sufficient number of colonies of a pure culture and to suspend the microorganism in 3.0 mL of sterile saline 0.45% in a clear plastic test tube.
- 4.1.2 The turbidity is adjusted accordingly (see Table 1) and measured using a turbidity meter called the Densi Chek™.

Table 1: Organism Suspension Range:

VITEK® 2 Cards	Acceptable Range
GN/ GN AST	0.50 - 0.63
GP/ GP AST	0.50 - 0.63
YST/ YST AST	1.80 - 2.20
NH	2.70 - 3.30
ANC	1.80 - 2.20

4.2 Inoculation:

- 4.2.1 For ID with susceptibility cards, place the inoculum tube (for ID) followed by an empty tube (for AST) into the cassette.
- 4.2.2 Insert the blue tube portion (hockey stick) of the Vitek card into the inoculum & the grey tube of AST card into the empty tube.
- 4.2.3 Prepare the required organism suspensions & insert the corresponding cards
- 4.2.4 Put the cassette on the smart Carrier station, the monitor will show message of erasing previous data. Wait until the data entry window shows.
- 4.2.5 Enter lab. number & change the isolate number if needed
- 4.2.6 Scan the Vitek ID card barcode. Use the → arrow key to move to the next cassette position.
- 4.2.7 Press F1 to copy the lab. number and isolate numbers from the previous position.
- 4.2.8 Scan the susceptibility card barcode
- 4.2.9 Always check the bottom of the Smart Carrier station screen to check current positions.

- 4.2.10 If you have additional cards to set up, use the arrow key to move to the next cassette position.
- 4.2.11 Otherwise, press F3 to review the cassette memory data. Carefully check that the lab. number, isolate number, card type and carrier position match the F3 screen.
- 4.2.12 Press F2 if you need to return to the cassette to add or alter any data.
- 4.3 Loading single cassettes into the Vitek2 system.
 - 4.3.1 Lift the cassette off the Smart Carrier Station and take it to the Vitek loading dock.
 - 4.3.2 If there is a solid green light below the loading door, open the loading door and place your cassette in the boat.
 - 4.3.3 If there is a blinking green light, remove the completed cassette and place your cassette into the boat. (If the light is off, the instrument is not ready to accept a cassette. Wait for the green light)
 - 4.3.4 Check that the cassette is properly seated, all caps are off the tubes, Vitek card hockey sticks are inside the suspension and susceptibility tubes and all cards are even.
 - 4.3.5 After loading the cassette, wait for the happy sound (confirms memory chip data matches the card barcodes loaded in the cassette).
 - 4.3.6 If you do not hear the happy sound, the cassette will return to the Cassette Load Station where it will remain for 10 minutes only. If no action is taken within 10 minutes, the cassette will be processed. Cards with load errors will NOT be processed and will return to the Cassette loading station. Remove the cassette and place it back on the Smart Carrier station. Correct errors and return to the Vitek2 loading dock.
- 4.4 To Review & Print Results
 - 4.4.1 From the main menu click on the "Enter Isolate View" icon. Choose options:
View by: date tested, Filter by: Show All
 - 4.4.2 Enter the corresponding patient data.
 - 4.4.3 From the isolate view, choose result to be printed, click on the "printer" icon, continue as in 4.6
- 4.5 To Search for an old Result:
 - 4.5.1 Click on the "Search Accession number" (magnifying glass) icon.
 - 4.5.2 Enter the lab. Number.
 - 4.5.3 Click OK, result will show
- 4.6 Printing Individual Vitek Results:
 - 4.6.1 Click on the "Printer" icon.
 - 4.6.2 Default is "Selected result report type:" Lab report. Choose "Chart report"
 - 4.6.3 Click "Print", click the 2nd printer choice, then OK
 - 4.6.4 Click "Cancel" to move to previous window.
- 4.7 Quality Control:
 - 4.7.1 All QC cards use only ATCC numbers to be included in the QC program.
- 4.8 Instrument Maintenance:
 - 4.8.1 Daily maintenance
 - 4.8.1.1 Remove the waste tray and discard the cards. Replace waste tray carefully to insure it is properly seated.
 - 4.8.1.2 At the instrument, press the "Menu" button, followed by "Display instrument QC status" button.
 - 4.8.1.3 Note section A and B temperatures and the optical system status and record in the LIS Vitek QC.
 - 4.8.1.4 Press the "Menu" button twice to return to the main menu.
 - 4.8.2 Weekly (see Appendix I)
 - 4.8.3 Monthly (see Appendix I)

5. MATERIAL AND EQUIPMENT:

- 5.1 Vitek2 System ID & AST Cards
- 5.2 Sterile saline 0.45%
- 5.3 QC ATCC strains

6. RESPONSIBILITIES:

6.1 All Microbiology Lab. Staff.

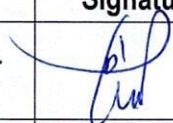




7. APPENDICES:

7.1 Vitek2 System Maintenance Chart

8. REFERENCES:

8.1 Vitek-2 Instrument User Manual, bioMérieux, Inc. Durham, North Carolina 27704-0969 / USA,

9. APPROVALS:

	Name	Title	Signature	Date
Prepared by:	Dr. Kawther M. Abdou	Consultant & Lab. Medical Director		January 02, 2025
Reviewed by:	Ms. Noora Melfi Alanizi	Laboratory & Blood Bank Director		January 05, 2025
Reviewed by:	Mr. Abdulelah Ayed Al Mutairi	QM&PS Director		January 07, 2025
Reviewed by:	Dr. Tamer Mohamed Naguib	Medical Director		January 12, 2025
Approved by:	Mr. Fahad Hazam Alshammari	Hospital Director		January 16, 2025

Appendix 7.1

Microbiology Section-Bacteriology

VITEK 2 MAINTENANCE LOG

Machine #

Month-Year:

Duty:	Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
DAILY DUTIES:																																
Check VT2 Status: clear messages on UIF																																
Check QC Status: Carousel Temperature																																
Check QC Status: Optics																																
Remove ejected cards																																
TECHNOLOGIST SIGN-OFF:																																
MONTHLY DUTIES: Please perform monthly duties on: _____ and date & initial tasks as they are done.																																
Clean Carousel																																
Clean Boats																																
Clean Optics & Diagnostic																																
Shutdown for the following:																																
Clean Card Collection Tray																																
Clean Base Pan, Vacuum Seal & Chamber																																
Clean Drip Pan																																
Turn VT2 back on																																
Clean Smart Carrier Stations																																
Clean Cassettes																																
Check & Record Densichek Plus + Calibration Standard	Calibrator Lot #	Expiry Date:										Acceptable Range																				
Densichek plus 0.0 McFarland											To zero instrument																					
Densichek plus 0.5 McFarland											0.44 - 0.56																					
Densichek plus 2.0 McFarland											1.85 - 2.15																					
Densichek plus 3.0 McFarland											2.79 - 3.21																					
Print & file monthly QC Report																																
AS REQUIRED:																																
Change Saline																																
Change Tips																																
Perform Dispensor Pipettor Test																																
SENIOR REVIEW																																
CORRECTIVE ACTION:																																