PROGRAM Standard Operating Procedure – Laboratory Services	
Title: MIC60030 – Vitek 2 Quality Control	Policy Number:
Program Name: Laboratory Services	
Applicable Domain: Lab, DI and Pharmacy Services	
Additional Domain(s):	
Effective Date:	Next Review Date:
Issuing Authority: Director of Health Services	Date Approved:
Accreditation Canada Applicable Standard: N/A	

GUIDING PRINCIPLE:
Quality control is performed on Vitek 2 cards to ensure proper functioning on a weekly basis and to ensure new shipments have not deteriorated during shipping.

PURPOSE/RATIONALE:
To standardize quality control procedures on the Vitek 2 instrument.

SCOPE/APPLICABILITY:
This procedure applies to Medical Laboratory Technologists (MLTs) performing quality control on the Vitek 2 instrument.

REAGENTS and/or MEDIA:
- Vitek AST-N390 cards
- Vitek AST-GP67 cards
- Vitek AST-ST03 cards
- Vitek GN, GP, NH, YST and ANC cards

SUPPLIES:
- ATCC QC organisms
- Plastic Vitek tubes and caps
- 0.45% Saline
- Sterile swabs
- DensiCHEK Plus
- Vitek 2 supplies

EQUIPMENT:
- Vortex
- Smart Carrier Station and cassettes
- Vitek 2 instrument

SPECIAL SAFETY PRECAUTIONS:

Containment Level 2 facilities, equipment, and operational practices for work involving infectious or potential infectious materials or cultures.

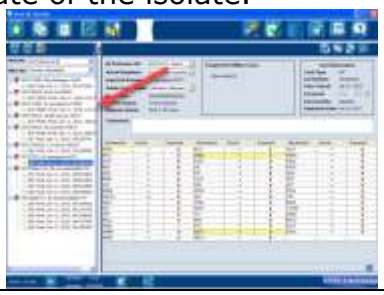
- Ensure that appropriate hand hygiene practices be used.
- Lab gown must be worn when performing activities with potential pathogens.
- Gloves must be worn when direct skin contact with infected materials is unavoidable.
- Eye protection must be used when there is a known or potential risk of exposure of splashes.
- All procedures that may produce aerosols, or involve high concentrations or large volumes should be conducted in a biological safety cabinet (BSC).
- The use of needles, syringes and other sharp objects should be strictly limited.

All patient specimens are assumed to be potentially infectious. Routine Practices must be followed. Since viable micro-organisms are used, all cultures must be handled with appropriate precautions. All equipment in contact with cultures should be decontaminated by appropriate methods.

PROCEDURE INSTRUCTIONS:

Step	Action
Performing quality control on the Vitek 2 instrument	
1	• Vitek 2 susceptibility card quality control is performed weekly by the Wednesday QC technologist, upon receipt of new cards and after bioMerieux preventative maintenance • Vitek 2 identification card quality control is performed upon receipt of new cards
2	Perform quality control testing with ATCC organisms and corresponding Vitek cards as per MIC60031-Vitek 2 Quality Control Job Aid.
3	Begin filling out MIC60032-QC Results Record-Vitek 2. Place on top of the Vitek 2 to be completed the following day.
4	At the SMART CARRIER STATION (SCS): 1. Ensure that the Smart Carrier Station is turned on 2. Place cassette on the Smart Carrier Station 3. Press F1 to erase cassette memory 4. Cassette ID is SCS, Tech ID is HAWK and Bench ID is QC 5. At Lab ID: use the "Vitek 2 Job Aid Card for the Smart Carrier Station" to scan the identification barcode of the QC organism
5	Set up cards as per procedure for card being quality controlled.
6	After the cards have been loaded onto the instrument, the cassette will travel back to the loading dock. Unload the cassette when light is flashing green.
7	Make purity plates using the grey or blue stick and BA plates labelled with labels from the "QC Stickers" binder. Incubate in the air incubator.

INTERPRETATION OF RESULTS:

Step	Action
Reviewing quality control on the Vitek 2 instrument	
1	All QC results must be reviewed on the Vitek 2 instrument: • From the Main view select the "Enter Quality Control View" icon 
2	QC isolates appear in the navigation tree. The results are organized by isolate groups. When an isolate is stopped for review, the icon beside the isolate represents the state of the isolate. 
3	If the icon beside the QC isolate is  , all QC parameters are within range for this isolate and do not contain any deviations.
4	If the icon beside the QC isolate is  , a QC parameter is out of range for this isolate and does contain deviations.
5	All QC results need to be reviewed, including results that contain deviations. Place the cursor on the QC result and select the "Review" icon to review the results. 
6	If all QC results are acceptable, complete MIC60032-QC Results Record-Vitek 2 with a checkmark in "QC OK" column and the reviewing technologist's initials in the "Review Tech" column. Place in the Vitek 2 Quality Control binder in month QC completed.
7	If all QC results are not acceptable, check purity plate to ensure organism was not mixed. If purity plate is pure, repeat quality control testing. If repeat QC testing is acceptable, complete MIC60032-Vitek 2 Quality Control Results record with the date the QC was repeated in the "Repeat QC Date" column, a checkmark in "Repeat OK" column and the reviewing technologist's initials in the "Review Tech" column. Place in the Vitek 2 Quality Control binder in month QC completed.

8	If repeat QC testing is still not acceptable: • Check the QC results. Test results that were not within the expected range will be highlighted • Ensure correct QC organism was used to inoculate the card • Check purity plate to ensure QC organism is not mixed • Re-sub QC organism from glycerol beads • Contact bioMerieux to determine if issues with card exist • Do not use card for patient isolates • Notify the Technical Supervisor, Microbiology for resolution • Until the problem is resolved, it may be necessary to use an alternate susceptibility or identification testing method

CROSS-REFERENCES:

- MIC60031-Vitek 2 Quality Control Job Aid
- MIC60032-QC Results Record-Vitek 2

REFERENCES:

1. bioMérieux Vitek 2 Instrument User Manual, 510731-10EN1, 2014-02
2. bioMérieux Vitek 2 Product Information Manual, 514740-3EN1, 2016-01

APPROVAL:

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Date

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REVISION HISTORY:

REVISION	DATE	Description of Change	REQUESTED BY
1.0	15 Sep 17	Initial Release	L. Steven
2.0	06 Oct 19	Procedure reviewed	L. Steven
3.0	05 Jul 21	Procedure reviewed and added to NTHSSA policy template	L. Steven
4.0	03 Jul 23	Procedure reviewed	L. Steven