

PROCEDURE: VITEK WEEKLY QC**I. DAILY QC (on both instruments)****Instrument #1 & Instrument #2**

- A. Record carousel temperatures
- B. Check the optics systems
- C. Ensure that instrument status is "OK"
- D. Address any messages on message screen
- E. Empty waste trays
- F. Check printer paper supply
- G. Fill out VITEK 2 Instrument Preventative Maintenance Checklist
- H. Check instrument Alarm history on VITEK 2 computer (Alarm button will be red)
- I. Decontaminate bench and Smart Carrier Station

II. WEEKLY QC

- A. Clean the Optics System (refer to VITEK 2 Maintaining the VITEK 2 Instrument, section 7-26)
- B. Susceptibility testing must have quality control testing performed each week. The weekly QC organisms will be alternated between the #1 and #2 instruments.
- C. Fill out Weekly QC Schedule sheet

Weekly Susceptibility QC Procedure:**VITEK 2 COORDINATOR/ DESIGNEE**

Subculture each QC organism to four TSAB slants monthly, from the bullets located in the -70°C freezer (main lab). Incubate slants at 35°C/CO₂. One TSAB slant for each QC organism is used for QC testing for each week of the month; slants are stored in the refrigerator (R3) until use.

Note: Save all slants for the entire month.

WEEKLY SCHEDULE**DAY 1 (Sunday)**

Subculture the TSAB slant to a fresh BAP, labeling plates with bar code labels located in second drawer in VITEK area; incubate at 35°C in CO₂.

AST-N812

E. coli 25922
Ps. aeruginosa 27853
E. coli 35218

AST GP-67

Ent. faecalis 29212
Ent. faecalis 51299
S. aureus 29213
S. aureus BAA1026
S. aureus BAA 976
S. aureus BAA 977

DAY 2 (Monday)

Set up VITEK cards from the fresh restreak plates in the CO₂ incubator according to standard VITEK protocol. Hit the QC icon, the bar code on each card needs to be scanned in under card type. Select organism being tested from the QC Organism ID drop down. All QC organisms are isolate #1.

DAY 3 (Tuesday)Review QC results as follows:

1. From VITEK screen, choose QC as bench.
2. View by "Test Date"
3. Filter by "Current, all isolates"
4. Approve (green check mark) all cards tested that don't have a red flag. A red flag indicates a QC result outside of the expected value.
5. Review and resolve results with red flags. Check purity and repeat testing.

Print QC results as follows:

1. From VITEK screen, Select Tools (wrench icon)
2. Select QC Cumulative Report
3. When the Cumulative QC search box appears, enter the date range to include one day previous and the current day's date.
4. Click OK to view the cumulative qc results report
5. Click on the printer to print the report
6. Check to make sure that QC cumulative report circle is selected. It is located on the left side of the screen.
7. Select the "Print All" icon at the bottom.
8. On the top of the sheets write "Weekly QC OK"; the VITEK instrument utilized for the QC (5135 or 5157); the date; initial.

Check for any deviations; use the previous week QC organism to repeat the testing (found in walk-in fridge). Put QC printout in the VITEK QC binder. All QC and deviations must be documented in the VITEK QC binder.

DAY 4 (Wednesday)

Check on any repeats and print reports as necessary. **If any deviations still exist, notify the QC coordinator, VITEK coordinator, and/or manager.**

Document any corrective action in the VITEK QC binder.

III. MONTHLY QC

- A. Clean Densichek (do not use alcohol)
- B. Perform Calibration on Densichek
- C. Print "Monthly Instrument Status Report" (temperatures and optics)
- D. Review of QC documentation
- E. Clean boats, carousel, cassettes, waste tray, base pan, vacuum seal, vacuum chamber, drip pan.

IV. NEW SHIPMENT/NEW LOT QC

- A. Print Certificate of Conformance for streamlined QC'd cards from bioMerieux website (All identification cards excluding NH card)
- B. Scan the barcodes of the new lots and enter quantities on the VITEK computer. (Quantity is the number of individual boxes received in the shipment.)
- C. Perform QC on any new shipment/Lot of cards received in lab.

QC ORGANISMS FOR VITEK IDENTIFICATION CARDS

QC organisms are frozen in the -70°C degree freezer, in boxes labeled **Vitek QC**.

1. Day 1

- A. Sub from freezer bullets to BAP for **GP** and **GN** cards.
- B. Sub from freezer bullets to CHOC for **NH** card.
- C. Sub from freezer bullets to Columbia Agar plates (NOTE: not CNA agar) for **ANC** card.
- D. Sub from freezer bullets to SAB for **YST** card.

2. Day 2

- A. Restreak to appropriate plates depending on card(s) to be QC'd.

3. Day 3

- A. Set up ID cards from fresh restreak plates. Refer to VITEK 2 Procedure for complete instruction for card set-up.
- B. Restreak to appropriate media again in case 3rd passage is needed.

Biomerieux recommends using the Streamlined QC requirements whenever possible. The Streamline method is now used for **GN, GP and ANC** cards. The New Comprehensive QC Requirements are used for the **NH and YST** card. Refer to [Appendix AP49 – Vitek 2 QC Expected results](#)

ID Card	New Streamlined QC Requirements	New Comprehensive QC Requirements
VITEK 2 GN Ref. No. 21341	<i>Enterobacter hormaechei</i> ATCC 700323 <i>Stenotrophomonas maltophilia</i> ATCC 17666	<i>Acinetobacter baumannii</i> ATCC BAA-747 <i>Elizabethkingia meningoseptica</i> ATCC13253 <i>Enterobacter hormaechei</i> ATCC 700323 <i>Klebsiella oxytoca</i> ATCC 700324 <i>Ochrobactrum anthropi</i> ATCC BAA-749 <i>Proteus vulgaris</i> ATCC 6380 <i>Pseudomonas aeruginosa</i> ATCC 9721 <i>Pseudomonas aeruginosa</i> ATCC BAA-1744 <i>Shigella sonnei</i> ATCC 25931 <i>Stenotrophomonas maltophilia</i> ATCC 17666
VITEK 2 NH Ref. No. 21346	<i>Eikenella corrodens</i> ATCC BAA-1152	<i>Aggregatibacter aphrophilus</i> ATCC 33389 <i>Eikenella corrodens</i> ATCC BAA-1152 <i>Enterobacter aerogenes</i> ATCC 13048 <i>Haemophilus influenzae</i> ATCC 9007 <i>Neisseria gonorrhoeae</i> ATCC 19424 <i>Neisseria lactamica</i> ATCC 23970 <i>Oligella urethralis</i> ATCC 17960 <i>Paenibacillus polymyxa</i> ATCC 7070 <i>Staphylococcus epidermidis</i> ATCC 12228

ID Card	New Streamlined QC Requirements	New Comprehensive QC Requirements
VITEK 2 GP Ref. No. 21342	<i>Enterococcus casseliflavus</i> ATCC 700327 <i>Staphylococcus saprophyticus</i> ATCC BAA-750	<i>Enterococcus casseliflavus</i> ATCC 700327 <i>Enterococcus saccharolyticus</i> ATCC 43076 <i>Kocuria kristinae</i> ATCC BAA-752 <i>Listeria monocytogenes</i> ATCC BAA-751 <i>Staphylococcus saprophyticus</i> ATCC BAA-750 <i>Staphylococcus sciuri</i> ATCC 29061 <i>Streptococcus equi</i> ssp. <i>zooepidemicus</i> ATCC <i>Streptococcus pneumoniae</i> ATCC 49619 <i>Streptococcus thermophilus</i> ATCC 19258
VITEK 2 YST Ref. No. 21343	<i>Candida albicans</i> ATCC 14053	<i>Candida albicans</i> ATCC 14053 <i>Candida glabrata</i> ATCC MYA-2950 <i>Candida lusitanae</i> ATCC 34449 <i>Candida utilis</i> ATCC 9950 <i>Kloeckera japonica</i> ATCC 58370 <i>Oligella ureolytica</i> ATCC 43534 <i>Prototheca wickerhamii</i> ATCC 16529 <i>Sporoboromyces salmonicolor</i> ATCC MYA-4550 <i>Staphylococcus epidermidis</i> ATCC 12228 <i>Trichosporon mucoides</i> ATCC 204094 <i>Zygosaccharomyces bailii</i> ATCC MYA 4549
VITEK 2 ANC Ref. No. 21347	<i>Clostridium septicum</i> ATCC 12464 <i>Bacteroides ovatus</i> ATCC BM-1296	<i>Bacteroides ovatus</i> ATCC BAA-1296 <i>Bacteroides vulgatus</i> ATCC 8482 <i>Clostridium perfringens</i> ATCC 13124 <i>Clostridium septicum</i> ATCC 12464 <i>Clostridium sordellii</i> ATCC 9714 <i>Corynebacterium striatum</i> ATCC BAA-1293 <i>Parabacteroides distasonis</i> ATCC BAA-1295

V. 6 MONTH QC

- A. Company performed preventative maintenance – typically the field service rep. contacts the laboratory manager to schedule an appointment.

VI. AS NEEDED QC

- A. Clean external surfaces
- B. Change Saline (perform dispense/ pipettor check)
- C. Change sterile pipette tips (perform dispense/ pipettor check)
- D. Alarms – address any issues immediately. Log any service calls in maintenance log.

VII. NOTES

- A. This document is to be used for basic guidance. The laboratory's Individualized Quality Control Plan (IQCP) contains complete details of the QC data and QA plan. Please, refer to this document for complete details.
- B. For complete instructions to use the VITEK 2 instrument, refer to the VITEK 2 Procedure.

VIII. REFERENCES

- A. VITEK 2 Systems Product information (COMPREHENSIVE QUALITY CONTROL)
- B. CLSI M50-A

IX. REVISIONS

- A. 05/13/2024 Organism updated for GP ID streamlined QC requirements, monthly QC requirements updated, biochemical charts updated for GN ID, GP ID, ANC, NH, and YST cards.
- B. 02/03/2025 Updated protocol including removal of AST-GN84 and addition of AST-N812 susceptibility cards and applicable information.