

Supply Disruption Event Summary

BD and Greiner, the two major U.S. suppliers of blood collection tubes, began experiencing a supply shortage of coagulation sodium citrate tubes in the spring of 2021. These tubes are critical for diagnostic testing along with monitoring anticoagulant therapy. The primary driver of the shortage is unprecedented demand due to COVID-19 infection rates and manufacturing issues, which have been rectified.

Due to COVID-19 infection rates continuing to be high into the fall, these supply issues have persisted, and we have begun seeing intermittent disruptions with other blood collection tubes, such as lithium heparin tubes. These challenges are anticipated to continue through at least early 2022.

Both suppliers are running production lines again, however, due to the efforts to catch-up on backorders and unprecedented demand, on top of raw material constraints and port/chassis transportation challenges, we are unable to anticipate when supply levels may begin normalizing. The priority for both BD and Greiner is to support and stabilize *existing* customers first, and new customers using competitive product can then be reviewed.

Due to the nature of these products, clinical validation and review is required prior to switching vendors or to alternative tubes offered by the same manufacturer.

Current Status as of November 03, 2021

- **BD:**
 - Visit <https://go.bd.com/vacutainer-supply-update> for the latest updates from BD on Vacutainer supply. This site includes materials on manual allocation, substitute options and conservation considerations.
 - **BD has an allocation process for existing customers that use BD as their *primary* supplier that are in an emergency scenario - where they are down to two days of supply.**
 - **Members approaching or in this scenario should work with their local IDS PAS BD rep to request access to emergency allocation.**
 - Customers should place their normal orders and BD will fill orders on a first-in, first-out basis.
 - BD is not setting historical allocations levels, and they ask each member to work with their PAS BD sales representative to identify manageable order levels.
 - BD is working closely with Premier authorized distributors to ship product.
- **Greiner:**
 - Impacted Greiner items include:
 - 454322 (2mL) | 454332 (3.5mL) | 454334 (3mL) Vacuette® coagulation sodium citrate tubes
 - Greiner is actively shipping tubes consistently against existing POs, which began late April.
 - Production lines are all back online, however, it is anticipated there will be a rolling backorder for the next several months as supply catches up.
 - Greiner is shipping product through standard distribution channels, however, PO's are not being filled at 100% and quantities will continue to be limited through the end of 2021.
 - Allocation will be based on a member's historical usage and product availability. Once recovered, distributors will supply current existing Greiner Coag tube customers based on historic consumption.
 - If your distributor's system shows no product is available, engage your local Greiner rep as the system may not show product in stock, but it may be available.
 - Greiner alternative product recommendations for these SKU's in short supply is the other SKU's in this grouping since some tubes may have better availability than the others.
 - Members should work with their local Greiner account manager if they are having challenges getting a specific SKU to determine if another may be available or with any questions.
 - [Greiner Product Communication dated August 2021](#) | [Greiner Product Communication dated September 2021](#)

Supply Conservation Recommendations

Inventory and Collection Practices

- For supply conservation, please encourage your Emergency Department staff to **only** collect coagulation tubes when the physician has a clinical need to order coagulation studies.
- Please **do not** automatically collect a "rainbow" of tubes to hold in anticipation of coagulation test orders. It is vital that you refrain from larger than normal orders as those will not be filled and only create delays or cancelled orders.
- Check stock of all areas where tubes are stored (e.g. nursing units and OR's) to assess capacity and ensure that tubes are not being stockpiled that could be released for patient testing in other areas.
- Halt any collection of duplicate tubes and share tubes between Laboratory departments (e.g collect one tube for CBC and HA1C testing and send tube from Hematology to Chemistry).
- Review minimum retest intervals with clinicians to avoid over-testing (e.g. HA1C, Vitamin B12, thyroid disease).
- Review minimum tube quantities for multiple test orders on same patient/draw.
- Review potential alternative collection tubes when appropriate, such as microtainers, tube sizes, and other validated specimen types.
- Rotate stock to ensure optimal usage of tubes and avoid expired product.

Provider Guidance

- Evaluate clinical necessity of all test orders to ensure only vital tests are ordered.
- When possible, reduce the frequency or extend the timing of standing orders, especially for medically stable patients.
- Reduce routine testing when where not clinically necessary (e.g. avoid routine pre-operative testing for low risk surgeries without a clinical indication).
- Work with providers to encourage "add-on" testing to samples already stored in the Lab.
- When possible, use Point of Care testing that does not require a tube for collection (e.g. fingerstick for hemoglobin and PT/INR).
- Routine wellness screening should not be made a priority.
- Allergy testing (except for overriding clinical indications) should not be made a priority.

Additional Resources and Links

- [FDA Sodium Citrate Blood Specimen Collection Tube Conservation Strategies – Letter to Health Care and Laboratory Personnel \(06/15/2021\)](#)
- [College of American Pathologists \(CAP\) Blue Top Tube Recommendations](#)
 - Includes mitigation strategy recommendations
- [BD Vacutainer Supply Update Website](#)
- [BD Vacutainer Blood Collection Tubes Supply Update \(09/13/2021\)](#)
- [Greiner Product Communication dated August 2021 | Greiner Product Communication dated September 2021](#)
- [Greiner Recall Notification \(03/29/2021\)](#)
- [Greiner Coagulation Tubes: High Altitude Selection Guide](#)
 - Note – high altitude tubes are not a suitable substitution for standard coagulation tubes