Fungite BULETIN volume 11, issue 3



Topic:

BG Analytics® Software Update

Addition of Estimated pg/mL Values

scussion:

The inclusion of an estimated Fungitell® pg/mL value with the Fungitell STAT® Beta-Glucan Index (BGI) result combines the convenience of a simplified, single vial method with an estimated pg/mL value to leverage the clinical knowledge developed over 20 years of Fungitell® clinical use.

Fungitell® is the reference standard for diagnosis of invasive fungal infection through detection of $(1\rightarrow 3)$ - β -D-glucan. Fungitell® is supported by over 20 years of clinical research and is referenced in over 400 peer-review publications, clinical studies, meta-ana<mark>lyses, a</mark>nd review articles. This history of use and consistent performanc<mark>e has l</mark>ed to the incl<mark>usion</mark> of $(1\rightarrow 3)$ - β -D-glucan testing in international and local guidelines for diagnosis of invasive fungal infection and clinical management. Fungitell® was 510(k) FDA-cleared in 2004, CE-marked in 2008, and since then utilized worldwide.

Fungitell STAT® - Single Vial Version Of Fungitell®

Fungitell STAT® provides a single vial version of the Fungitell® assay. It employs a simplified procedure that provides a BGI result using a reference standard included with the kit. Fungitell STAT® was 510(k) FDA-cleared and CE-marked in 2019 based on 99% Positive Percent Agreement and 98% Negative Percent Agreement with the Fungitell® assay (D'Ordine et al., 2021).

Fungitell* Bulletins are intended as technical advisory communications and as such are disseminated to the general public in order to highlight the significance of $(1 \rightarrow 3)$ - β -D-Glucan on human health. These communications do not promote a specific drug, therapy nor make any representation or suggestion concerning the suitability or effectiveness of a particular drug or therapy in patients harboring (1→3)-β-D-Glucan. Fungitell® is an adjunct diagnostic assay to be utilized in conjunction with clinical signs and symptoms for the diagnosis of invasive fungal infection. Fungitell® is currently 510(k) cleared for the detection of $(1 \rightarrow 3)$ - β -D-Glucan in human serum and should be used and interpreted only in a manner consistent with the current Instructions for Use.

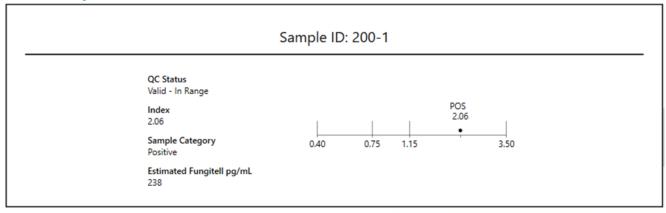


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BG Analytics® Test Result



An estimated Fungitell® pg/mL value is now provided in addition to the BGI with the updated BG Analytics® software released on July 1, 2025. Additional software improvements include the display of a standard kinetic trace when an invalid standard result is recorded (for troubleshooting purposes) as well as compatibility with Microsoft® Windows® 11.

Software Update Procedure

To update the software to the new version, follow these steps: (1) back up the existing system, (2) uninstall the old software, (3) install the new software and then (4) restore the database. Note that the software/database is generally installed per user. See section 2.5; Installation and Update Procedures and section 2.8; Backup & Restore of Database of the BG Analytics® User Manual for more details.

Estimated Fungitell® pg/mL Value – A Link To 20 Years Of Clinical Research

Fungitell® and Fungitell STAT® share the same reagent, buffer, pre-treatment, 40-min assay time, colorimetric method and Vmean analysis. Both Fungitell® and Fungitell STAT® are manufactured in the same facility where the Fungitell STAT® Standard is calibrated against the 80 pg/mL positive cut-off of the Fungitell® assay.

| | Fungitell® | Fungitell STAT® | |
|------------------|--|--|--|
| Glucan Standard | Pachyman (Poria cocos) | Saccharomyces cerevisiae calibrated against pachyman | |
| Reagent | Chromogenic prepared from amebocytes of Limulus polyphemus | Unchanged | |
| Buffer | Tris pH 7.4 | Unchanged | |
| Reagent Water | LAL reagent water | Unchanged | |
| Pre-treatment | Alkaline Pre-treatment 37°C for 10 min. | Unchanged | |
| Method | Absorbance at 405nm | Unchanged | |
| Measured Entity | Release of pNA at 37°C during 40 min. | Unchanged | |
| Data Reduction | Vmean in mAbs/min. linear/linear | Vmean in Abs/sec., linear fit | |
| Sample Matrix | Serum | Unchanged | |
| Reported Results | pg/mL | Index | |
| Range | 31 – 500 pg/mL | 0.4 – 3.5 index units | |
| Cut-off Value | 80 pg/mL | 1.2 BGI | |
| Manufacturer | ACC – USA | ACC - USA | |

The similarities between the methods and the fact that each lot of Fungitell STAT® is calibrated against the Fungitell® reference glucan standard allowed for the development of a mathematical model from which an estimated Fungitell® pg/mL can be derived. The model was validated against the original Fungitell® pg/mL results from the Fungitell STAT® versus Fungitell® Method Comparison study reported in Section 13.2 of the Fungitell STAT® Instructions For Use (IFU) with a linear correlation of 0.91. *Note:* The clinical categorization remains based on the BGI which was validated using an expanded indeterminate zone (i.e. 60-95 pg/mL). Both are qualitative methods with inter/intra assay variability of up to 30%. Please refer to the Fungitell STAT® IFU for complete information.

| Cut-off | Fungitell® (pg/mL) | Fungitell STAT® (BGI) | Estimated Fungitell® pg/mL Now Available With Fungitell STAT® |
|---------------|--------------------|-----------------------|---|
| Negative | <60 | ≤0.74 | <60 |
| Indeterminate | 60-79 | 0.75-1.1 (1.14) | 60-95 |
| Positive | ≥80 | ≥1.2 (1.15) | ≥96 |