Rapid Identification and MICSusceptibility of Candida, RapID Yeast Plus System and Sensititre YeastOne Panels

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Abstract

Background: With the increasing rate of fungal infections each year, rapid identification, and MC confirmation is important to initiate effective therapies. An evaluation was undertaken to determine identification agreements between the Brilliance™ Candida (BC) (Thermo Fisher Scientific, Basingstoke, UK) and the RapID Yeast Plus System (RDP) (Thermo Fisher Scientific, Lenexa, Kansas) as well as the Sensititre™ YeastOne™ (YOG) (TREK Diagnostic Systems, part of Thermo Fisher Scientific, Cleveland, Ohio) susceptibility system. The BC agar is a selective and differential medium for the rapid identification of Candida spp. The RapID is a qualitative identification for the rapid identification of Candida spp. Sensititre YeastOne system is designed for use in determining quantitative antifungal susceptibilities (MICs). Results: The RapID Yeast Plus and Sensititre YeastOne are both rapid methods in clinical labs for performing quantitative antifungal susceptibilities (MICs). Isolates were taken directly from the BC agar and were inoculated onto Sabouraud Dextrose Agar (SAB) for a more rapid identification and MIC. Methods: 100 isolates including 38 C. albicans, 16 C. tropicalis, 24 C. glabrata, 10 C. parapsilosis, 3 C. lusitaniae, and 7 C. krusei, were inoculated onto a BC agar and SAB. Both agars were incubated at 35°C. C. tropicalis, C. krusei, C. dubliniensis, C. lusitaniae, C. parapsilosis, C. albicans, C. glabrata, C. parapsilosis, 5-Flucytosine, Posaconazole, Voriconazole, Itraconazole, Fluconazole, Anidulafungin, and Amphotericin B. Tests were read as per the manufacturer’s instructions. % Essential/Categorical Agreement

Conclusions

• The Sensititre YeastOne susceptibility testing panel can be used as a direct susceptibility test for suspect organisms isolated on Brilliance Candida Agar. The prior use of Brilliance Candida Agar compared to the SAB does not influence the MIC result. • The Sensititre YeastOne susceptibility testing panel can also be used in combination with the 4 hour RapID Yeast Plus system for a rapid identification and susceptibility result. • Either of these combinations of testing, Brilliance Candida Agar with the Sensititre YeastOne susceptibility panel, or the YeastOne with RapID offers a rapid, simple solution for identification, confirmation and antifungal susceptibility testing of Candida spp.

References


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