

00328 Evaluation of Non-nasopharyngeal Swab Specimens on the Biofire Filmarray Respiratory Panel

Jiang Zhenghao, Matthias Maiwald, Loo Liat Hui

KK Women's & Children's Hospital

Aims: The Biofire Filmarray Respiratory Panel (Biomerieux) detects pathogens causing respiratory infections. It is a rapid and accurate system that can detect 17 different viruses and 3 bacterial species in less than 1.5 hours. However, only nasopharyngeal swabs in universal transport media (UTM) have been validated for use by the manufacturer. However, other types of respiratory tract specimens often need to be tested in order to diagnose infections, particularly in critically ill patients.

Methodology: Forty-eight clinical specimens of different types such as dry nasopharyngeal swabs (NPS), nasopharyngeal aspirates (NPA), bronchoalveolar lavage (BAL), pleural fluids, bronchial washings, and endotracheal aspirates (ETTA) were used in this evaluation. They were tested using both the Biofire Filmarray Respiratory Panel and the Seplex RV15 ACE Detection (Seegene) kit, according to the manufacturer's instructions.

Result: The results obtained were mostly in agreement between both systems. Eight NPS specimens, 13 NPA specimens, 6 BAL specimens, 6 bronchial washing specimens, 7 ETTA specimens, and 2 pleural fluid specimens were in concordance. Two NPS and two NPA specimens were positive for additional pathogens using Biofire Filmarray Respiratory Panel. Two NPA specimens were positive for additional pathogens using Seplex RV15 ACE Detection kit. The agreement between both assays was 87.5%.

Conclusion: We found that non-NPS specimen types are generally suitable for use with the Biofire Filmarray Respiratory Panel, with good agreement between tests. This will enable our laboratory to continue testing non-NPS sample types with the Biofire Filmarray Respiratory Panel.