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Poster Session V

Diagnostic microbiology: from lower respiratory tract infections to gynaecological infections
PERFORMANCE OF COPAN FECALSWAB AND ESWAB FOR CULTURING VANCOMYCIN RESISTANT ENTEROCOCCUS (VRE) FROM CLINICAL SPECIMENS.

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Objectives: Vancomycin-resistant enterococci (VRE) are an emerging cause of hospital-acquired infections. Improved isolation of vancomycin-resistant enterococci (VRE) without loss of sensitivity and results turn-around-time (TAT) would significantly improve infection control of health care facilities. Copan is producing two liquid based microbiology (LBM) devices, the FecalSwab (FS) (a tube with 2ml of modified Cary Blair Medium+a regular flocced swab) and the ESwab (ES) (a tube with 1ml Amies liquid Medium+a regular flocced swab). These two LBM devices can be used for the collection of clinical specimens for the investigation of VRE using both VRE Chromagar and blood agar culture on the WASP automation. The objective of this study is to compare the FecalSwab and ESwab for the detection of VRE in selective and non selective agar.

Methods: Resistant ATCC strains, 700221 resistant *E.faecium*, 700425 intermediate *E.gallinarum*, 20212 sensitive *E.faecalis*, 51299 highly resistant *E. faecalis* and 10231 contaminant *C. albicans* were used for the study. Clinical stool specimens (N=72) already tested for VRE, used to prepare FS and ES samples, were also included in this validation. FS and ES tubes not inoculated and inoculated with a known negative stool sample, were spiked with a countable (300-30 CFU) dilution of each ATCC strain; inoculums of 200ul for FS samples and 100ul for ES samples. Both FS and ES ATCC and clinical samples were plated in triplicate at 0 time, after 2 hours and after 24 hours in blood and VRE Chromagar plates using the 1ul, 10ul and 30ul loops on WASP. Plates were incubated at 35°C, and after 24 hours CFU were counted and recorded.

Results: All the FS and ES, without and with stool samples, spiked with resistant, sensitive, and contaminant ATCC strains grew in blood agar plates.

E.Faecium, *E.gallinarum*, *E.faecalis* and *C. albicans* didn't grow in the VRE Chromagar; only the highly resistant *E. faecalis* had countable colonies for all inoculation times and with the 1, 10 and 30 ul loop volumes. Both FS and ES clinical samples grew in blood agar, while only 12 were positive in VRE Chromagar. Using isolated colonies, all clinical samples on blood culture were identified with the Microgen ID chambers (Microgen Bioproducts) as 8 *C.albicans*, 11 *E.gallinarum*, 14 *E.faecalis*, 15 *E.faecium* and 24 VRE *E. faecalis*.

Conclusions: Copan FecalSwab and ESwab collection devices are supporting the growth Vancomycin-resistant enterococci (VRE) *E. faecalis* when plated in VRE Chromagar, with all the inoculation volumes. The VRE Chromagar detected only the VRE positive FS and ES clinical specimens. Samples collected in both FecalSwab and ESwab, inoculated in VRE Chrome agar and identified with the Microgen ID chambers, can be used for the screening VRE colonized patients.