Comparative Performance of Two Liquid AmiesTransport Systems for the Recovery of Fastidious Bacteria Following the CLSI M40A Swab Elution protocol at Room Temperature Incubation.

Bharat Ghandi*, Tony Mazzulli1,2
1Department of Microbiology, Mt. Sinai Hospital and University Health Network, Toronto, Canada, and 2University of Toronto, Toronto, Canada

Method Continued

Fastidious Bacteria tested:
- Neisseria gonorrhoeae ATCC 43069 (NG)
- Neisseria meningitidis ATCC 19424 (NG)
- Neisseria meningitidis ATCC 13077 (NM)
- Haemophilus influenzae ATCC 49247 (HIN)
- Haemophilus influenzae ATCC 10211 (HIN)
- Streptococcus pneumoniae ATCC49619 (SPN)

Transport swab system:
- Hydration®®: Puritan Medical Products Company LLC (P)
- Modified Liquid Amies Medium, Puritan Medical Products Company LLC ESwab™: Transport System (Copan Diagnostics Inc.) (CT)

Figure 2: HydratFlock®: ESwab® (centre), FLOQSwab® (right)

Results

<table>
<thead>
<tr>
<th>Average colony counts (CFU)</th>
<th>0 hr (RT)</th>
<th>24 hr (RT)</th>
<th>48 hr (RT)</th>
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Table 1: Comparison of colony counts for different swab systems and incubation times.

Conclusion

1. In general based on this limited study, Puritan’s HydratFlock and the Copan’s ESwab systems were comparable in their ability to recover fastidious bacteria after 24 and 48 hours at room temperature incubation.
2. Only the Puritan’s HydratFlock swabs completely absorbed the 100 µl inoculums (96% of strains).
3. The release recovery function of all three systems appears to be comparable at zero hour incubation.
4. The zero hour colony counts were lower for one of the two HIN (HIN atoc 49247), as a result all three systems failed to recover at 48h incubation.
5. These results point to the fact that treating the swabs may not be beneficial for the recovery of all organisms.
6. Further studies will be performed and the data was presented using more fastidious organisms.

Figure 1: HydratSwab (left), ESwab (centre), FLOQSwab (right)

Method

Protocol Tested (CLSI Swab Elution Quantitative Method): The protocol used for viability studies was modified based upon the Swab Elution Method as described in the CLSI standard Quality Control of Microbiology Transport System. M40-A Vol 23 No. 34, 2003.