HardyCHROM™ SS NoPRO

Prospective Evaluation of HardyCHROM™ SS NoPRO Agar for *Salmonella* and *Shigella* Isolation from Routine Stool Culture

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Abstract:

Background: Traditional stool culture media (e.g. Hektoen enteric agar) have high rates of isolation of non-pathogenic microbiota that can mimic the colony morphologies of *Salmonella* and *Shigella* species. Consequently, traditional stool cultures are associated with significant culture work-up and thus higher demands on technologists' time. HardyCHROM™ SS NoPRO is inhibitory to Proteus species and would be anticipated to reduce the number of unnecessary work-ups from stool cultures.

Methods: From June-August 2017, all stools received for clinical stool culture testing were inoculated in parallel on HardyCHROM™ SS NoPRO agar. Results of standard of care and HardyCHROM™ SS NoPRO agar testing were directly compared. The number of cultures negative for *Salmonella* and *Shigella* but requiring further work-up was assessed and a cost analysis was performed.

Results: A total of 175 stool cultures were performed during the study period. Nine specimens were positive for *Salmonella* and *Shigella* species by standard of care culture (5.1% positivity rate): *Shigella flexneri* =6, *Shigella sonne*i =1 and *Salmonella* species =2. 76 specimens required additional work-up with the standard of care culture, compared with 28 specimens for HardyCHROM™ SS NoPRO (specificity of 54% and 83%, respectively). In total, 90 colonies from SS agar required further work up (cost = $848) compared with 30 colonies from HardyCHROM™ SS NoPRO (cost = $157) during the study period.

Conclusions: Compared with SS Agar, HardyCHROM™ SS NoPRO would have reduced the number of cultures requiring work-up by 50% and reduced the overall costs associated with stool culture by 80% when colonies were directly identified by MALDI-TOF.

Acknowledgments/ References:

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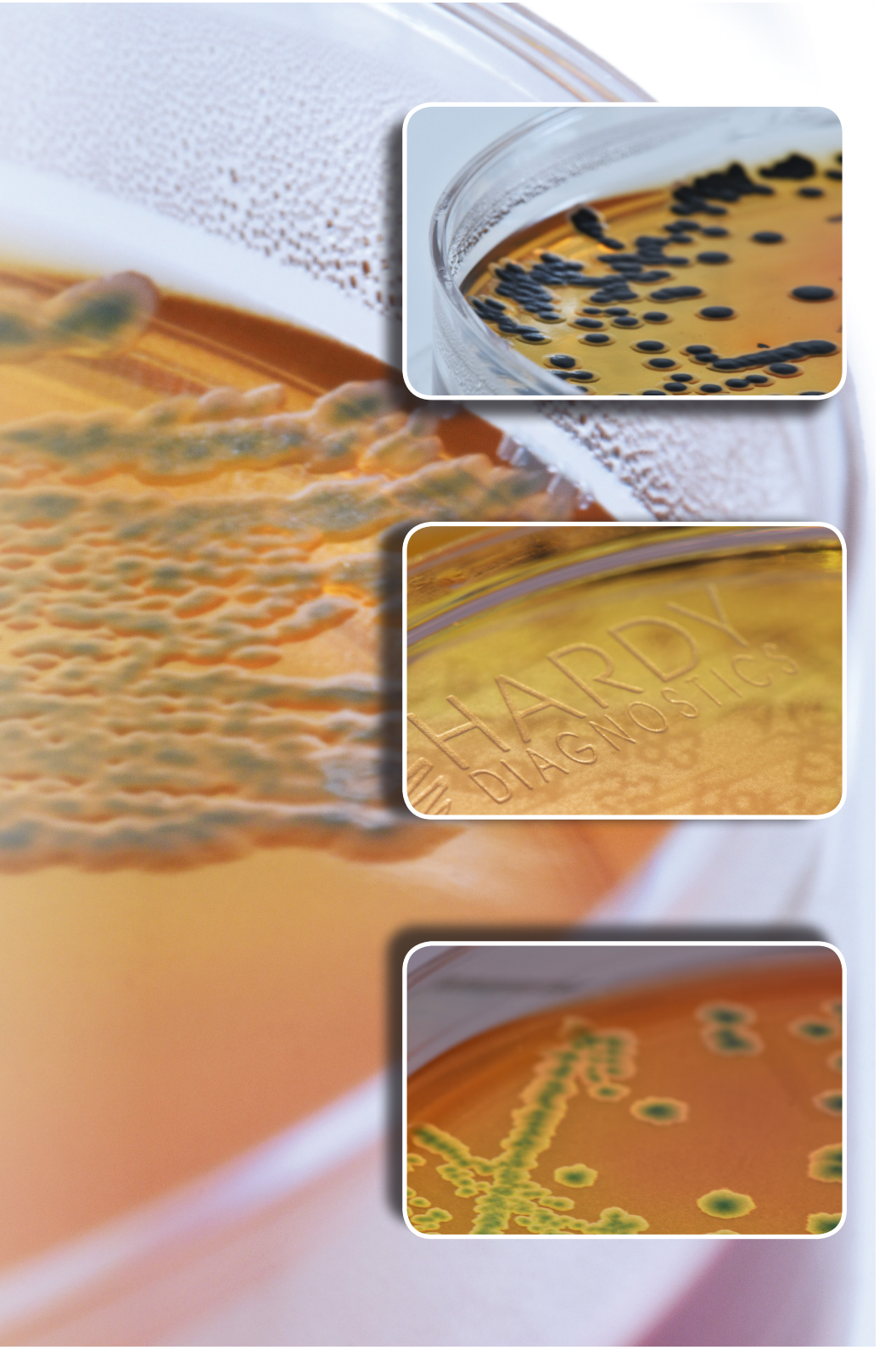
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